3.6 Conducted Spurious Emission Measurement

3.6.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30MHz up to a frequency including its 10^{th} harmonic.

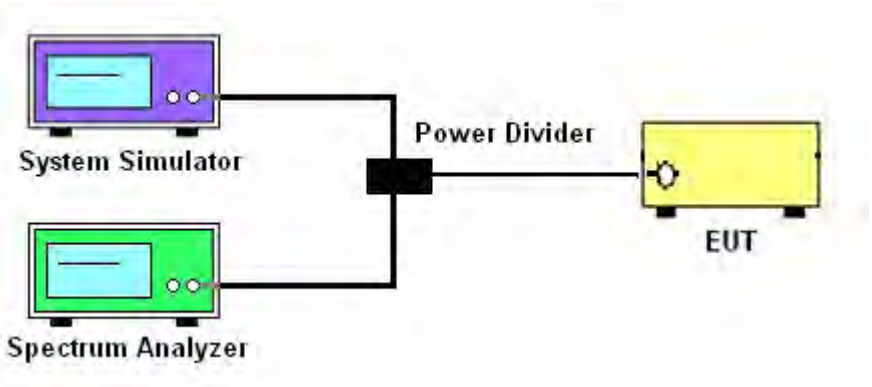
3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [43 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
   = -13dBm.
8. For Band 7
   The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)
   = P(W)- [55 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [55 + 10log(P)] (dB)
   = -25dBm.

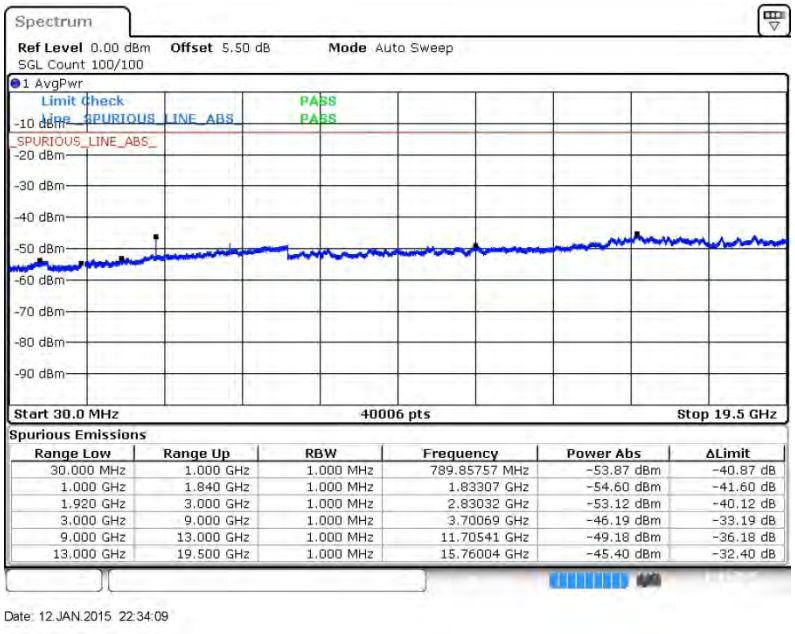
3.6.4 Test Setup



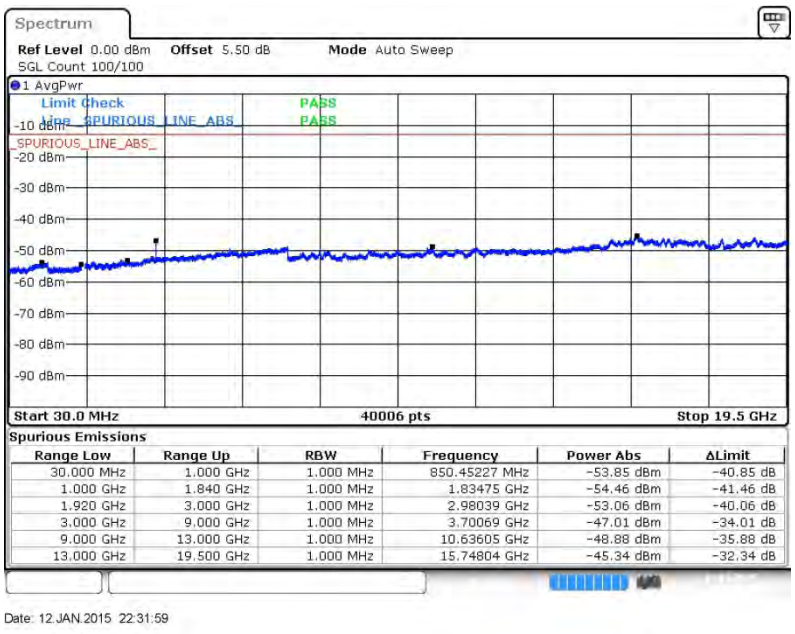
3.6.5 Test Result (Plots) of Conducted Spurious Emission

Band :	LTE Band 2	Channel :	CH18607 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 2)

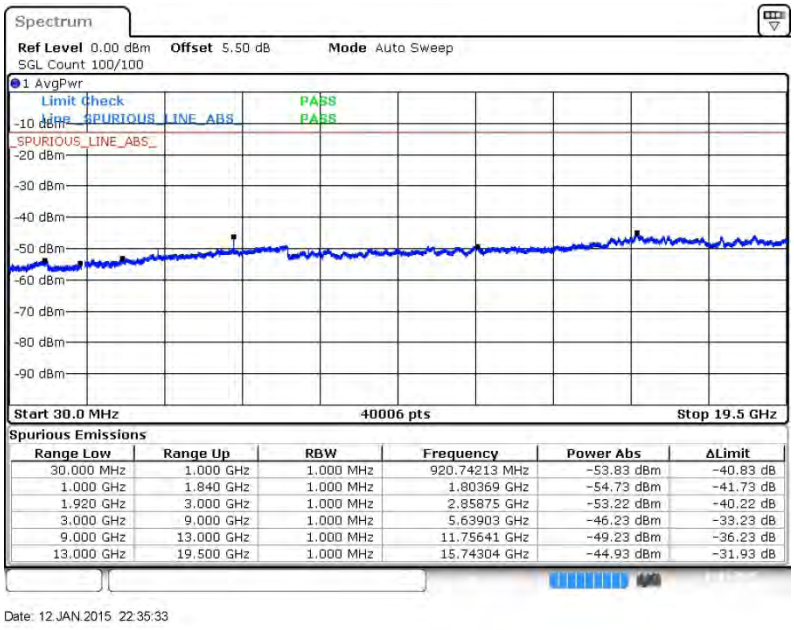


16QAM (RB Size 1, RB Offset 0)

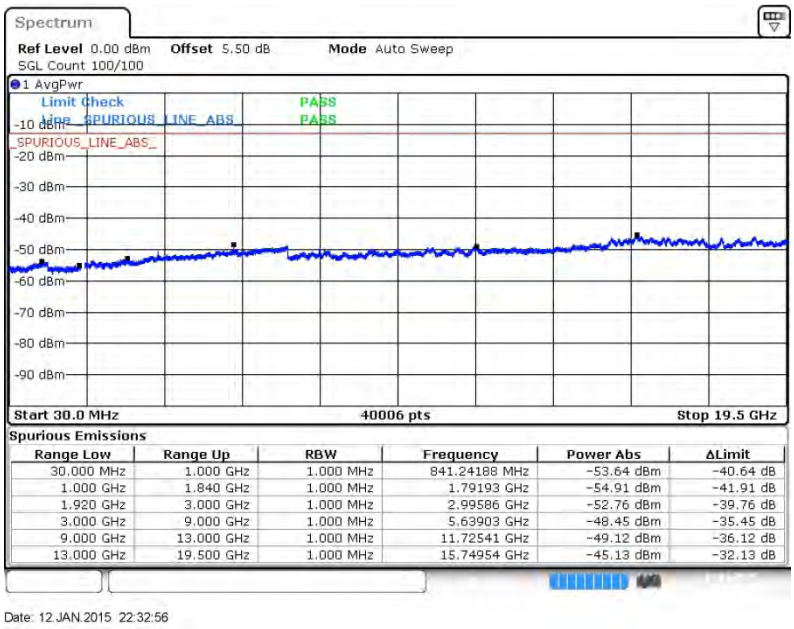


Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 5)

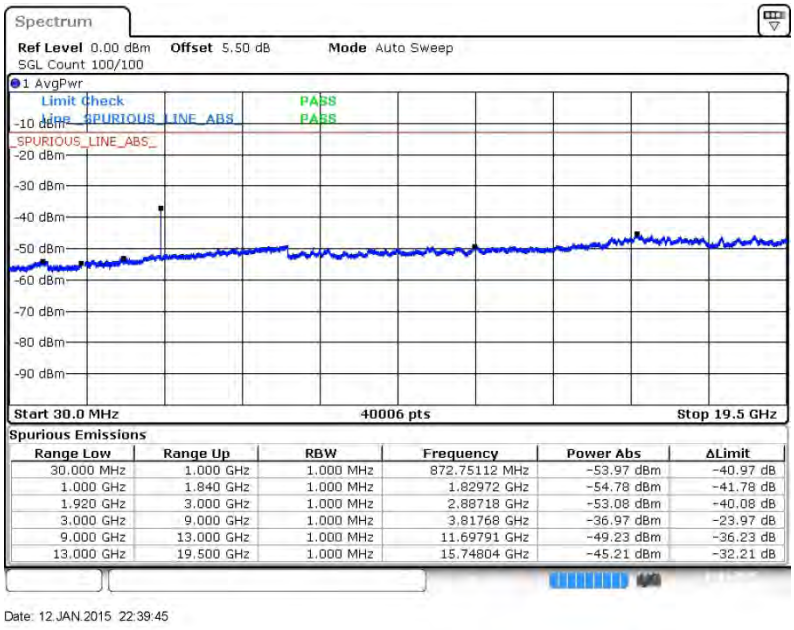


16QAM (RB Size 1, RB Offset 2)



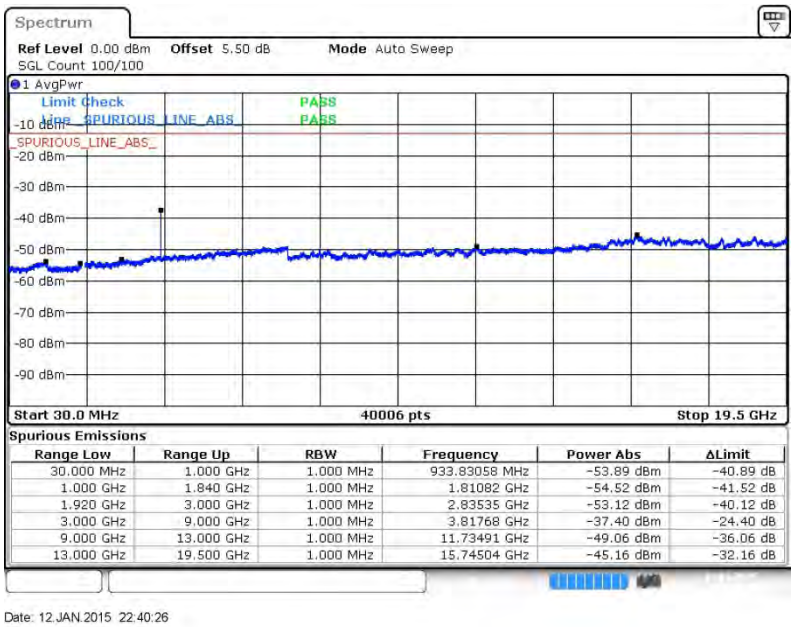
Band :	LTE Band 2	Channel :	CH19193 (High)
Band Width :	1.4MHz		

QPSK (RB Size 3, RB Offset 2)



Date: 12.JAN.2015 22:39:45

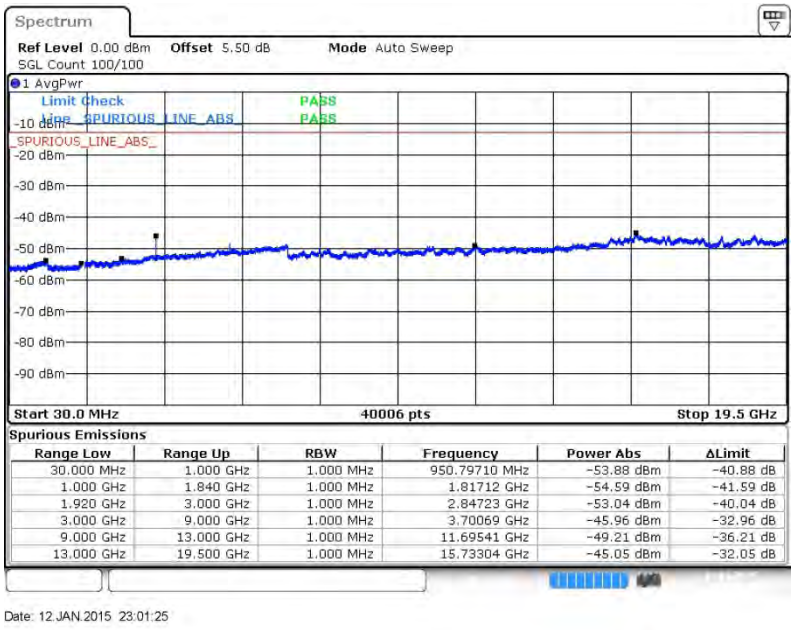
16QAM (RB Size 3, RB Offset 2)



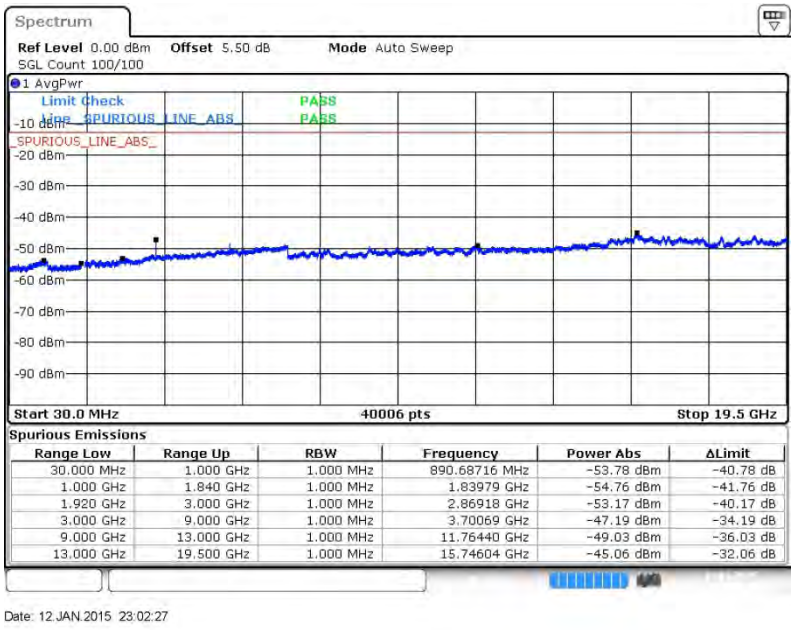
Date: 12.JAN.2015 22:40:26

Band :	LTE Band 2	Channel :	CH18615 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 7)

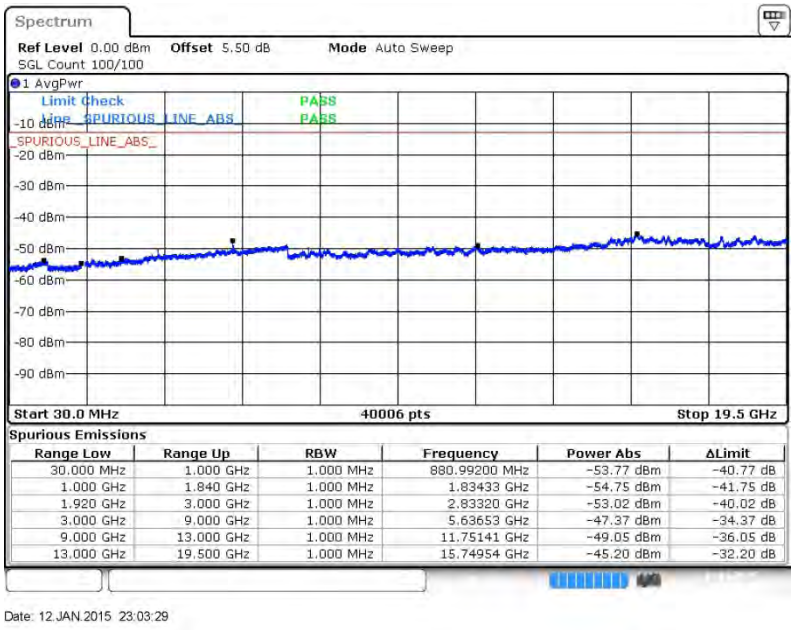


16QAM (RB Size 1, RB Offset 0)



Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 14)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	880.99200 MHz	-53.77 dBm	-40.77 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.83433 GHz	-54.75 dBm	-41.75 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.83320 GHz	-53.02 dBm	-40.02 dB
3.000 GHz	9.000 GHz	1.000 MHz	5.63653 GHz	-47.37 dBm	-34.37 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.75141 GHz	-49.05 dBm	-36.05 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.74954 GHz	-45.20 dBm	-32.20 dB

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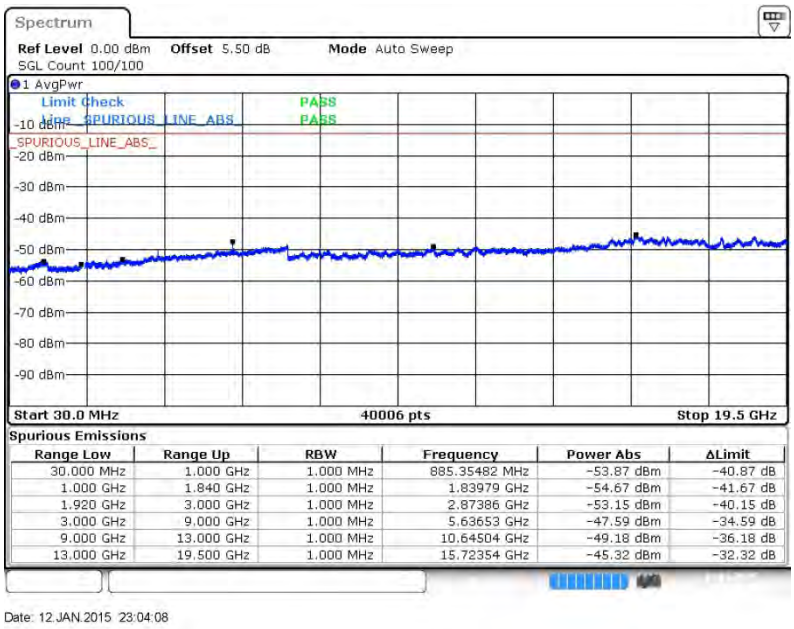
16QAM (RB Size 1, RB Offset 14)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	885.35482 MHz	-53.87 dBm	-40.87 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.83979 GHz	-54.67 dBm	-41.67 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.87386 GHz	-53.15 dBm	-40.15 dB
3.000 GHz	9.000 GHz	1.000 MHz	5.63653 GHz	-47.59 dBm	-34.59 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.64504 GHz	-49.18 dBm	-36.18 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.72354 GHz	-45.32 dBm	-32.32 dB

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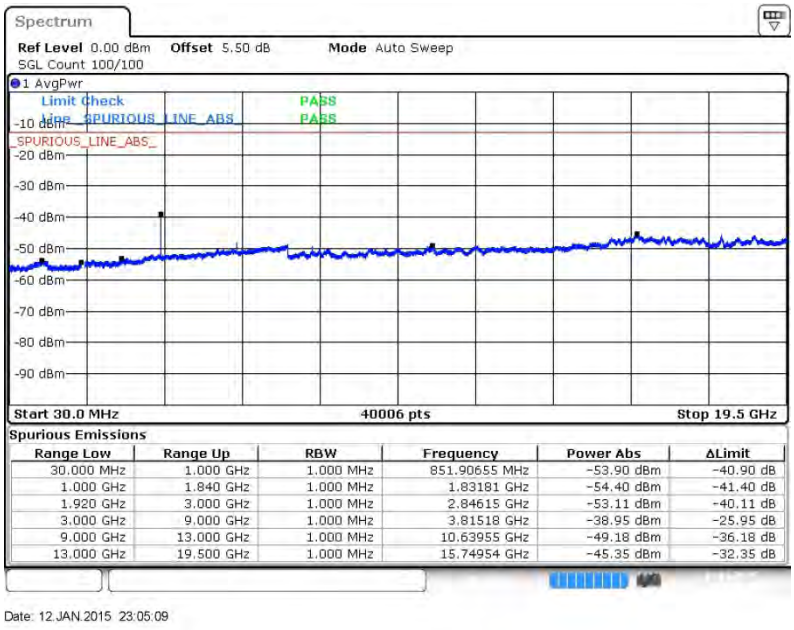
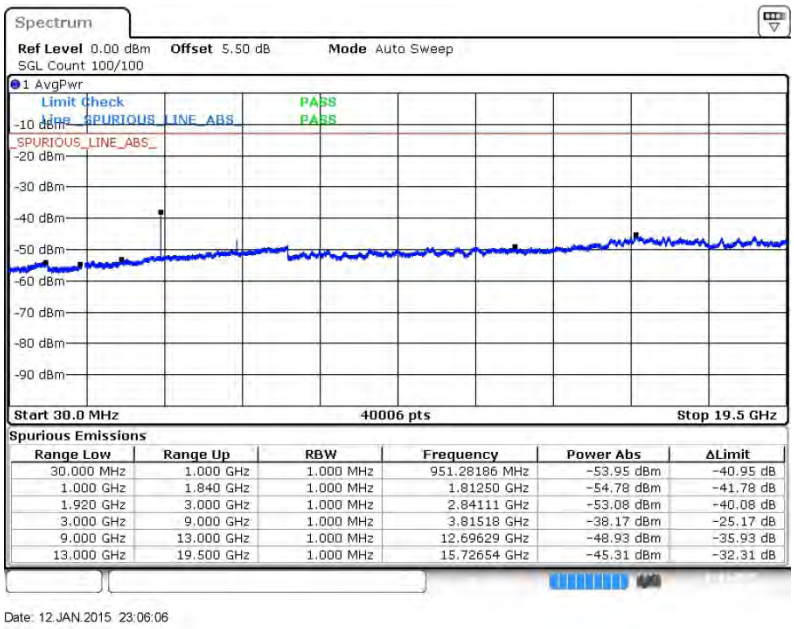
Band :	LTE Band 2	Channel :	CH19185 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)

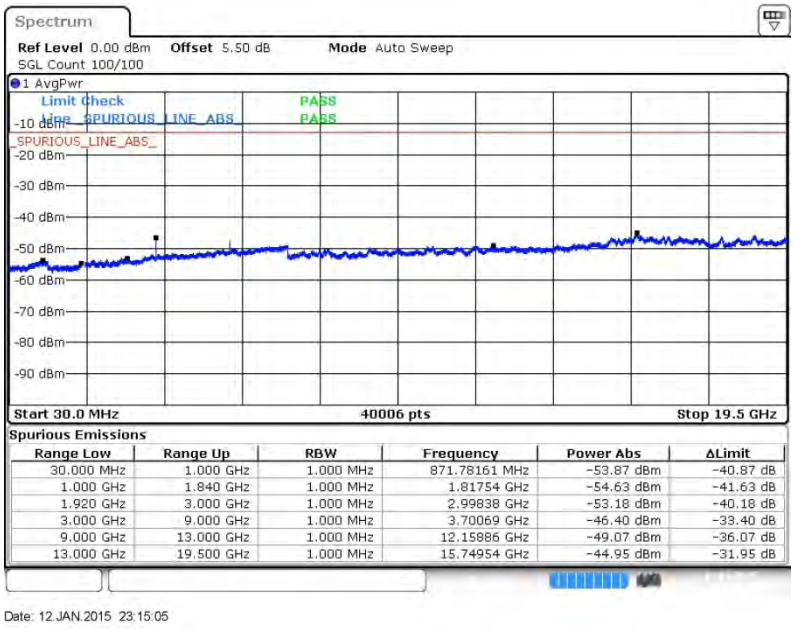


16QAM (RB Size 1, RB Offset 0)

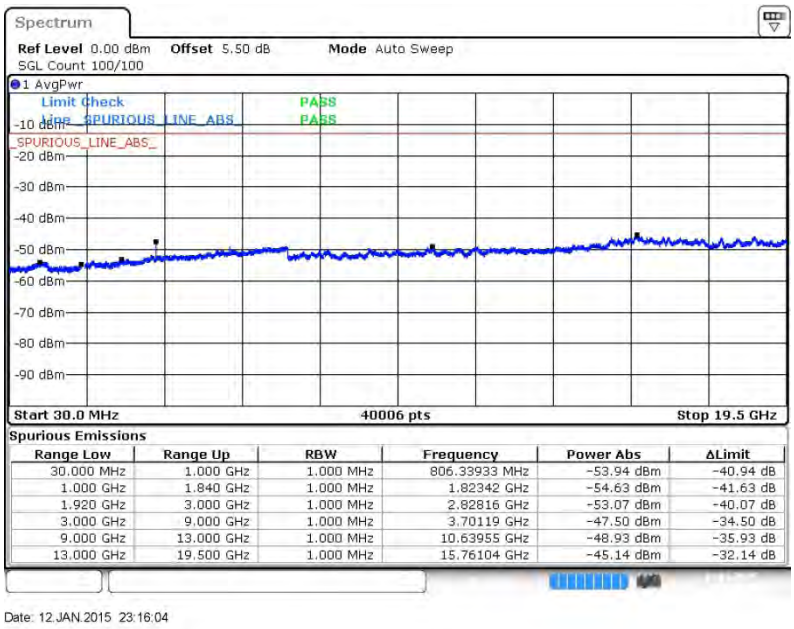


Band :	LTE Band 2	Channel :	CH18625 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)

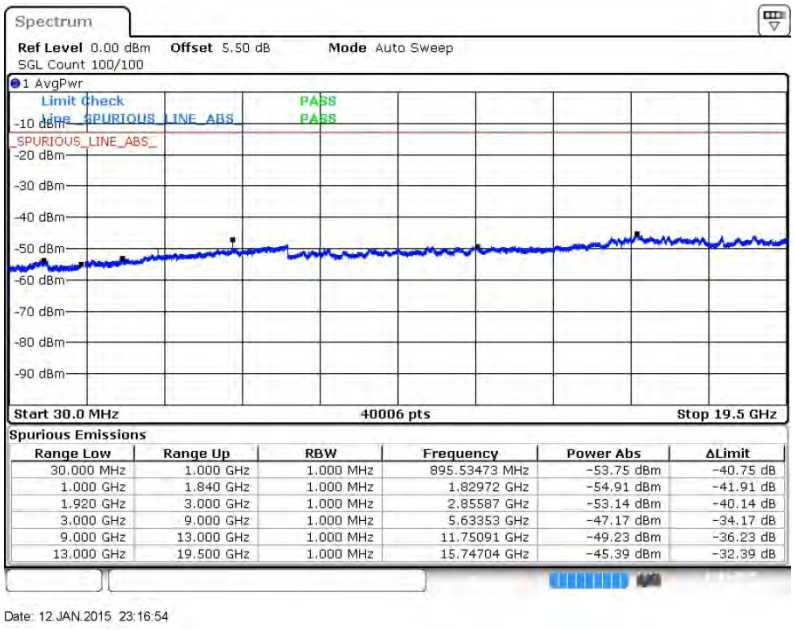


16QAM (RB Size 1, RB Offset 12)

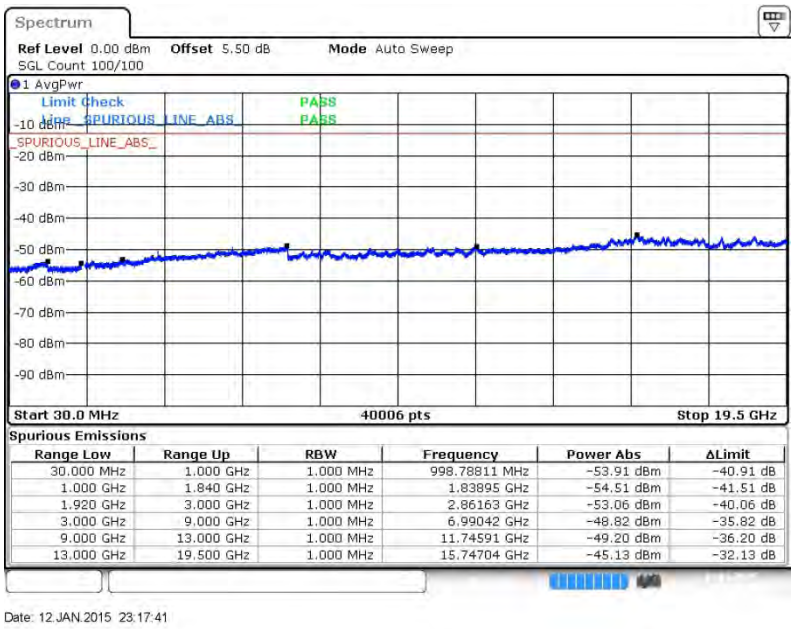


Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)

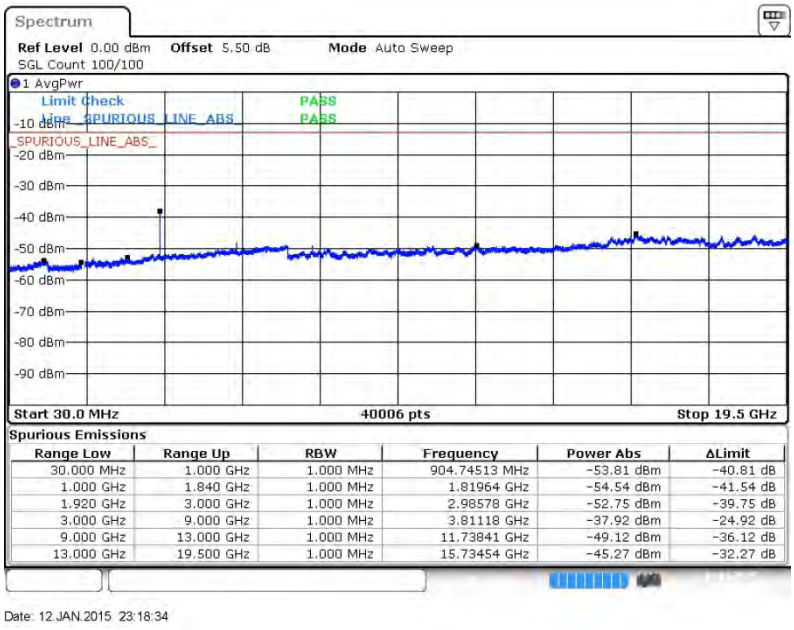


16QAM (RB Size 1, RB Offset 0)

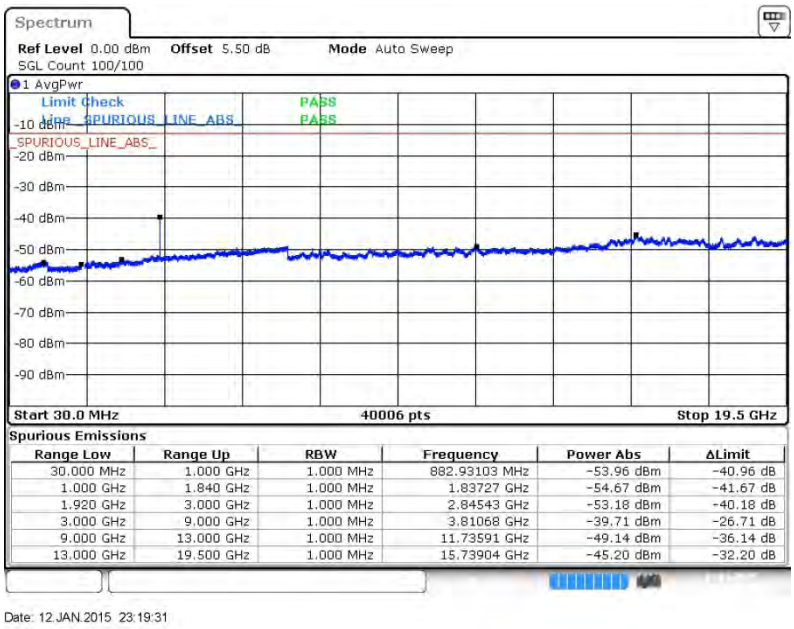


Band :	LTE Band 2	Channel :	CH19175 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 24)

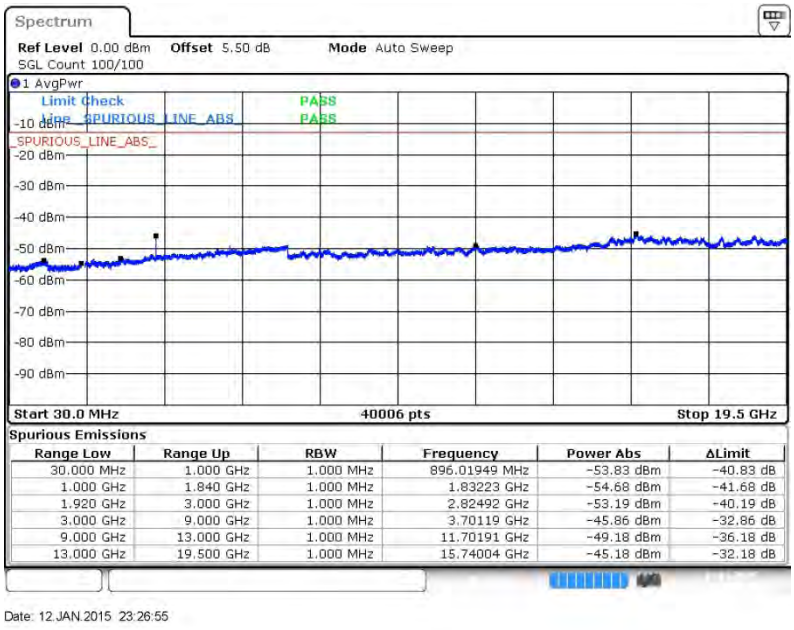


16QAM (RB Size 1, RB Offset 12)

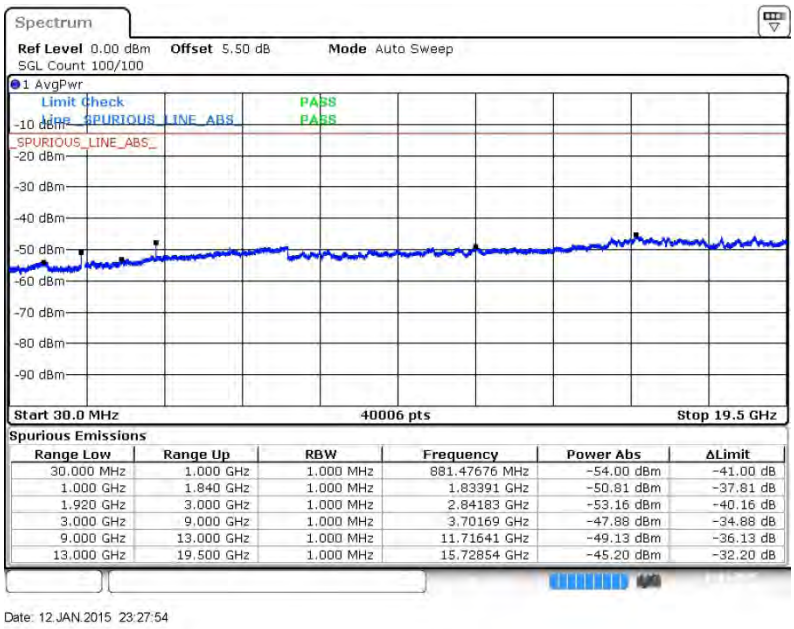


Band :	LTE Band 2	Channel :	CH18650 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)

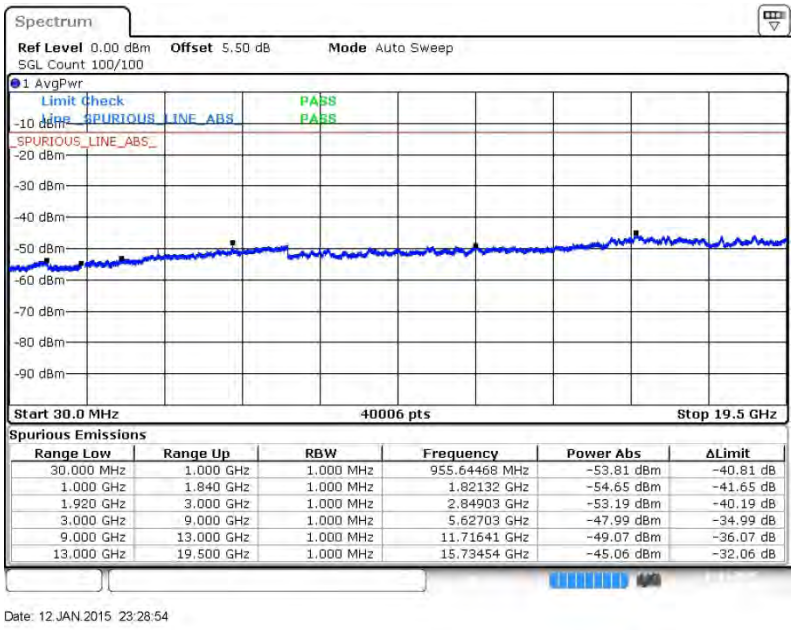


16QAM (RB Size 1, RB Offset 0)

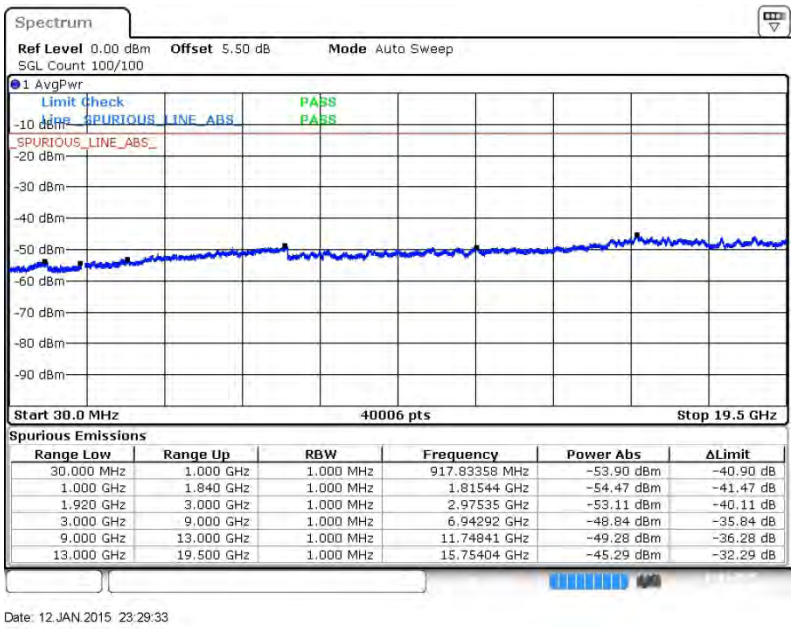


Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)

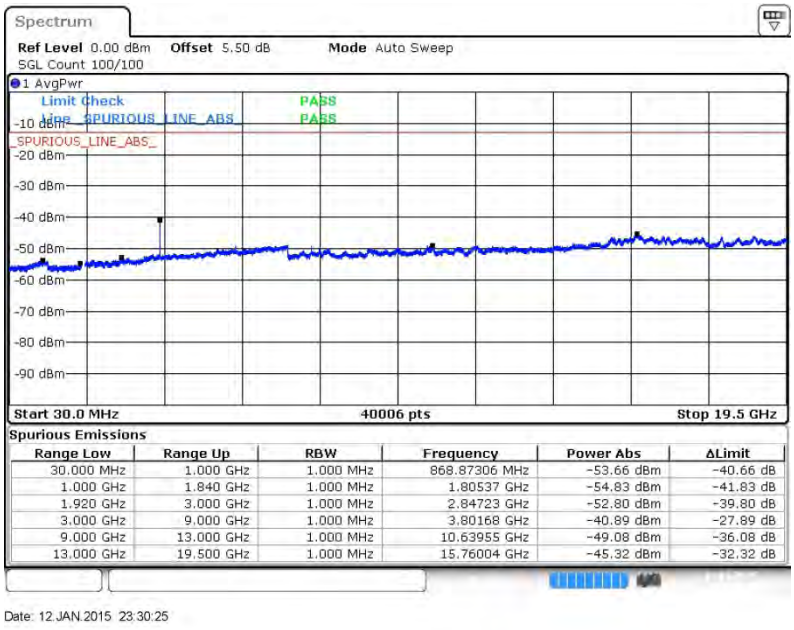


16QAM (RB Size 1, RB Offset 0)



Band :	LTE Band 2	Channel :	CH19150 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 49)

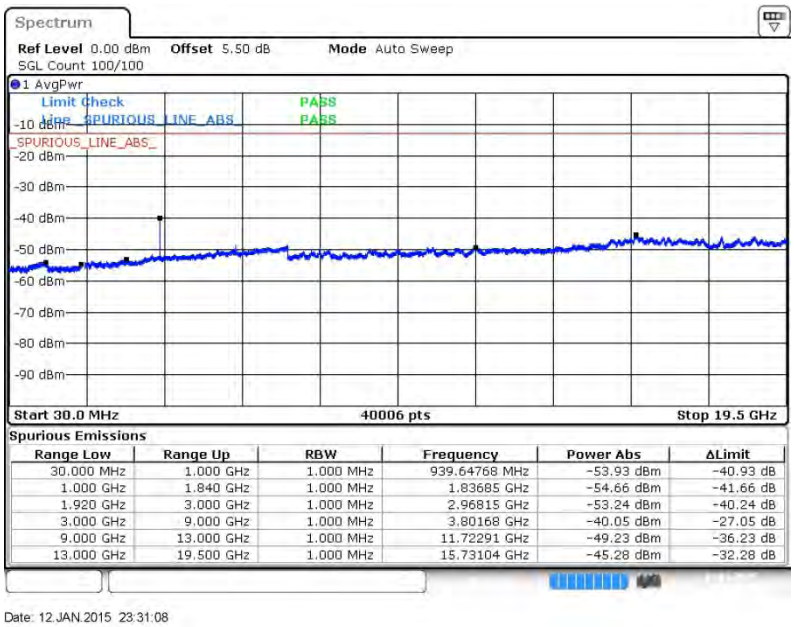


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	868.87306 MHz	-53.66 dBm	-40.66 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.80537 GHz	-54.83 dBm	-41.83 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.84723 GHz	-52.80 dBm	-39.80 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.80168 GHz	-40.89 dBm	-27.89 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.63955 GHz	-49.08 dBm	-36.08 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.76004 GHz	-45.32 dBm	-32.32 dB

Date: 12.JAN.2015 23:30:25

16QAM (RB Size 1, RB Offset 24)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	939.64768 MHz	-53.93 dBm	-40.93 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.83685 GHz	-54.66 dBm	-41.66 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.96815 GHz	-53.24 dBm	-40.24 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.80168 GHz	-40.05 dBm	-27.05 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.72291 GHz	-49.23 dBm	-36.23 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.73104 GHz	-45.28 dBm	-32.28 dB

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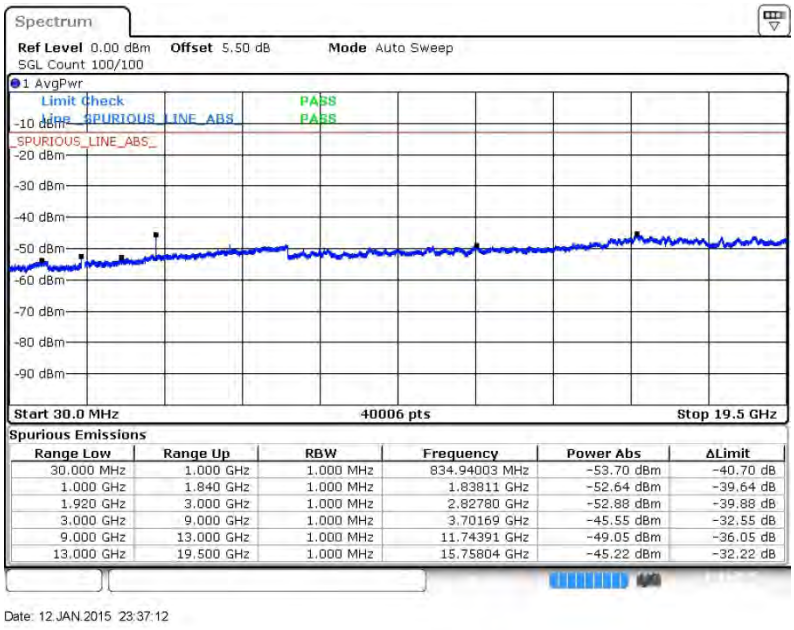
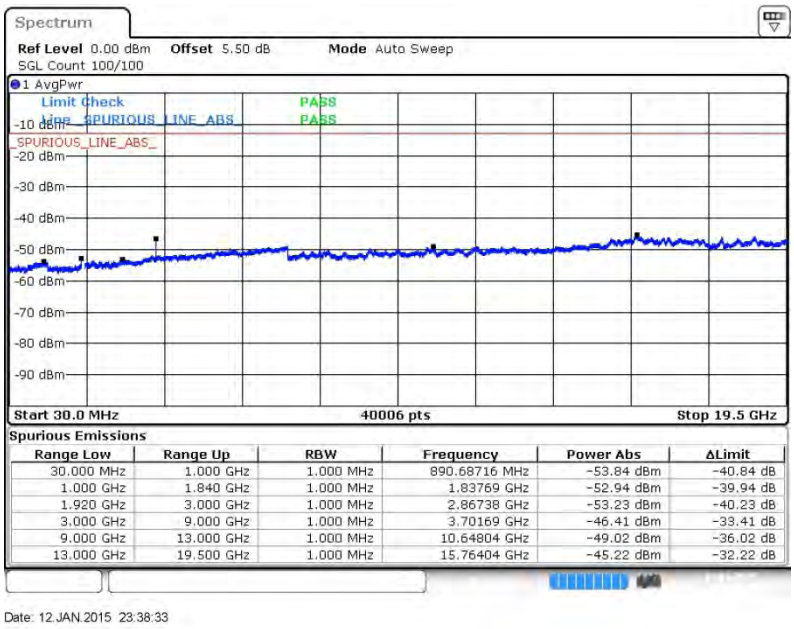
Band :	LTE Band 2	Channel :	CH18675 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)

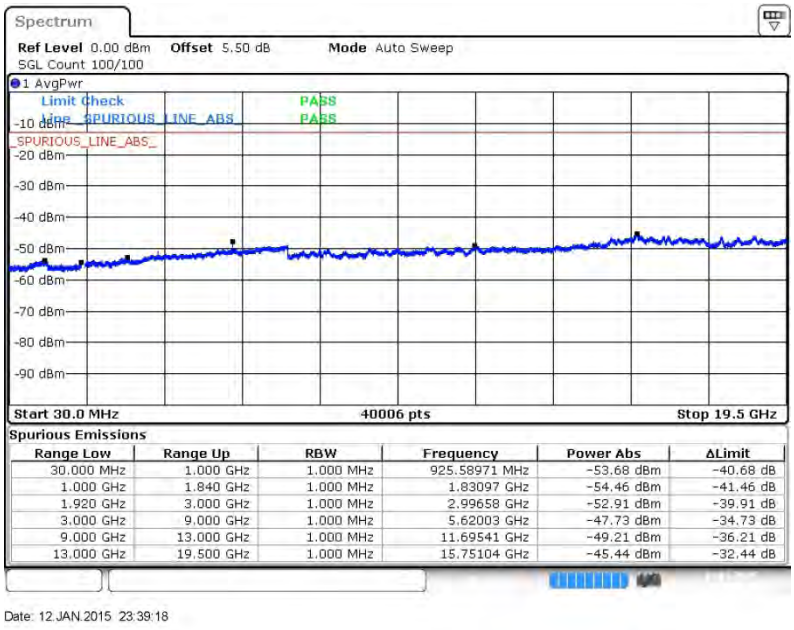


16QAM (RB Size 1, RB Offset 0)



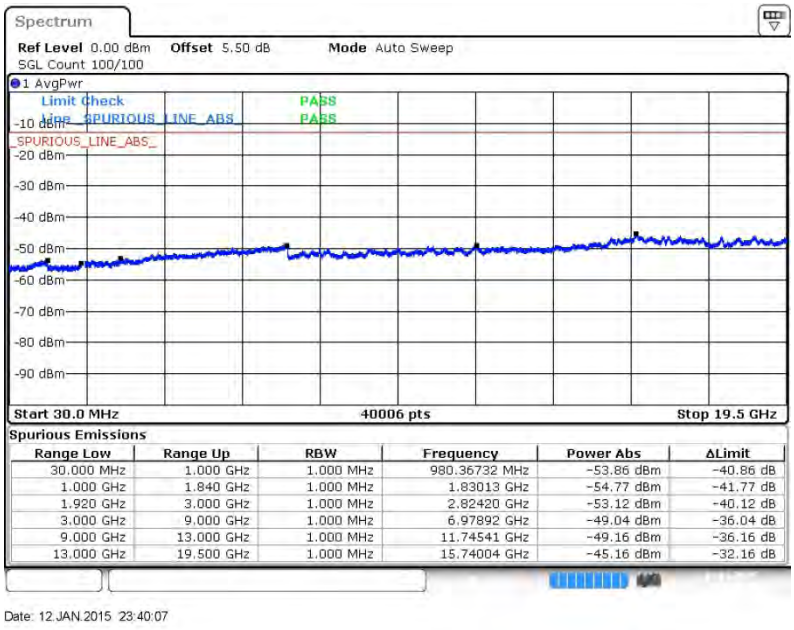
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 12.JAN.2015 23:39:18

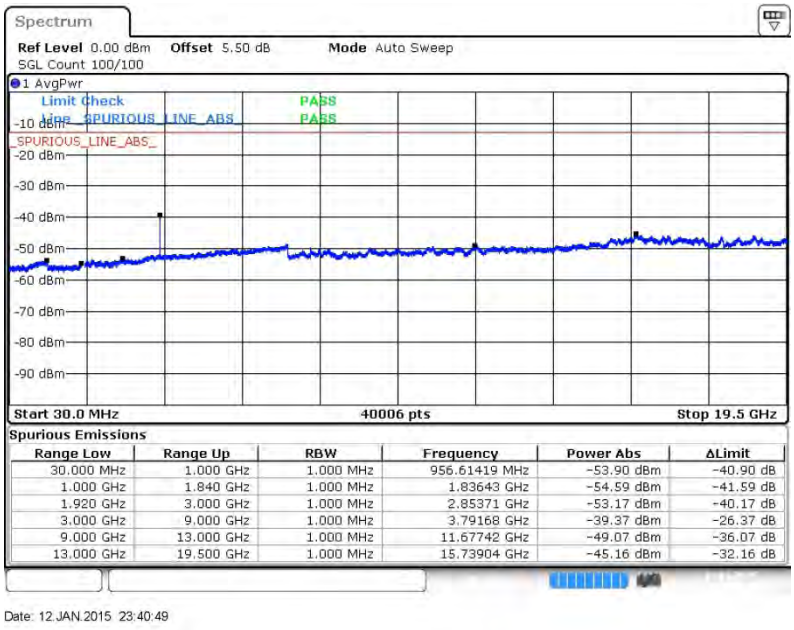
16QAM (RB Size 1, RB Offset 0)



Date: 12.JAN.2015 23:40:07

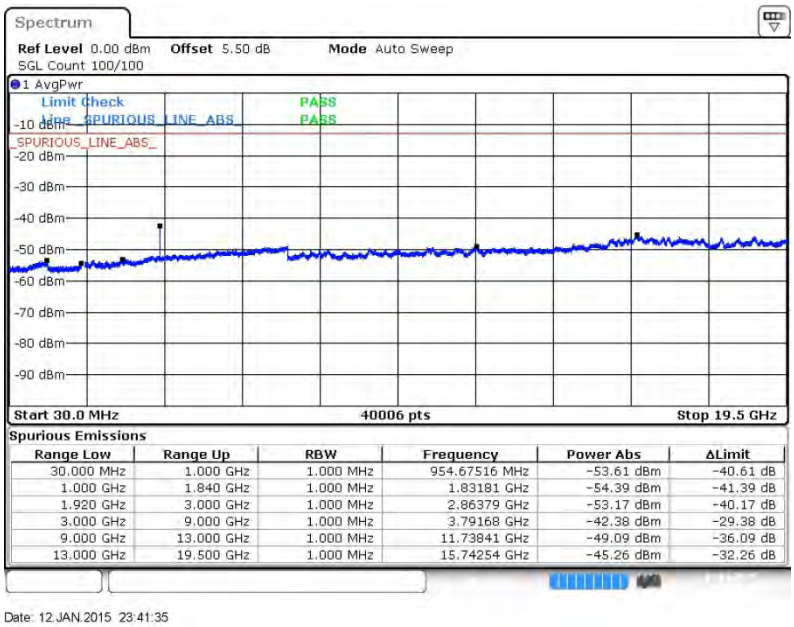
Band :	LTE Band 2	Channel :	CH19125 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 74)



Date: 12.JAN.2015 23:40:49

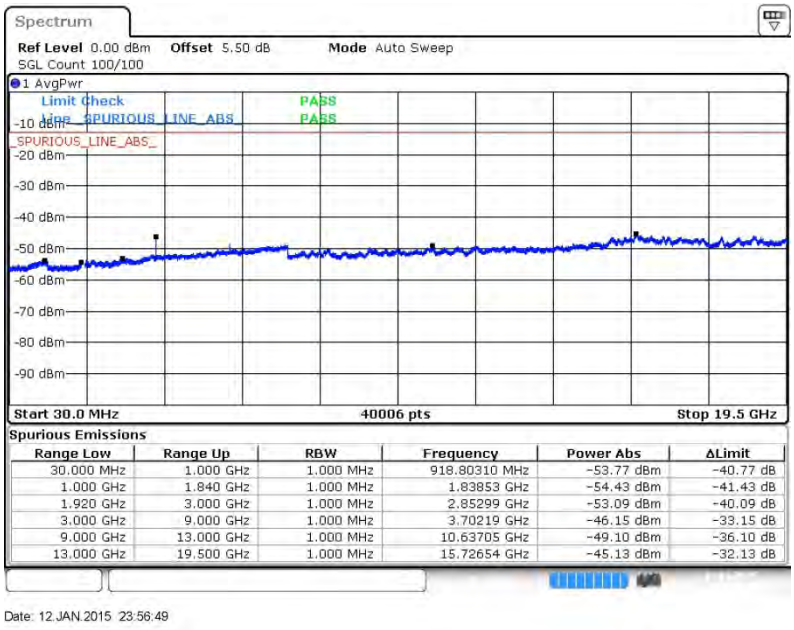
16QAM (RB Size 1, RB Offset 74)



Date: 12.JAN.2015 23:41:35

Band :	LTE Band 2	Channel :	CH18700 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)

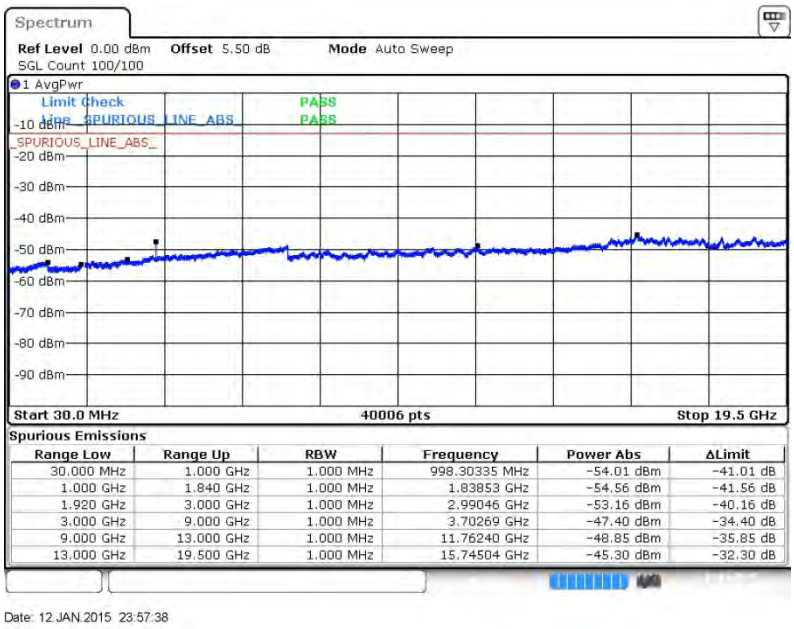


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	918.80310 MHz	-53.77 dBm	-40.77 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.83853 GHz	-54.43 dBm	-41.43 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.85299 GHz	-53.09 dBm	-40.09 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.70219 GHz	-46.15 dBm	-33.15 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.63705 GHz	-49.10 dBm	-36.10 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.72654 GHz	-45.13 dBm	-32.13 dB

Date: 12.JAN.2015 23:56:49

16QAM (RB Size 1, RB Offset 0)



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	998.30335 MHz	-54.01 dBm	-41.01 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.83853 GHz	-54.56 dBm	-41.56 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.99046 GHz	-53.16 dBm	-40.16 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.70269 GHz	-47.40 dBm	-34.40 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.76240 GHz	-48.85 dBm	-35.85 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.74504 GHz	-45.30 dBm	-32.30 dB

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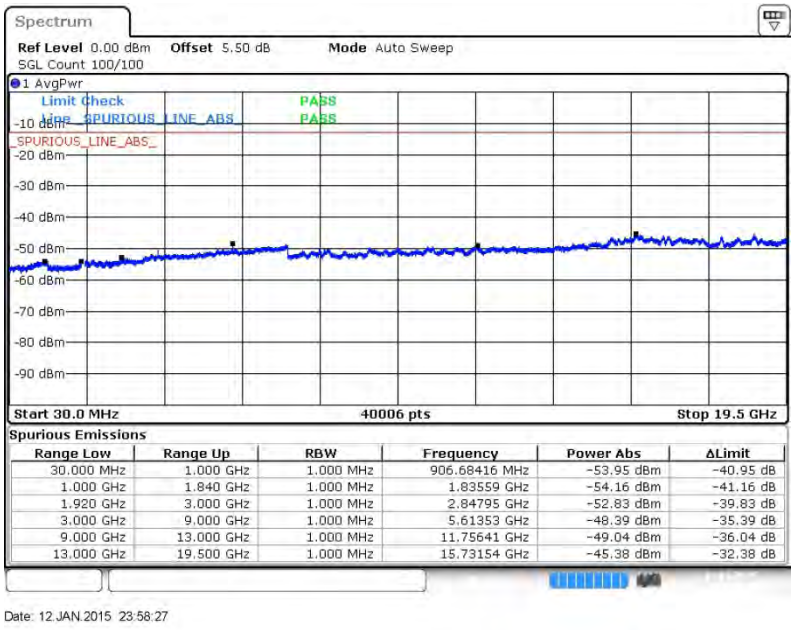
Band :	LTE Band 2	Channel :	CH18900 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)

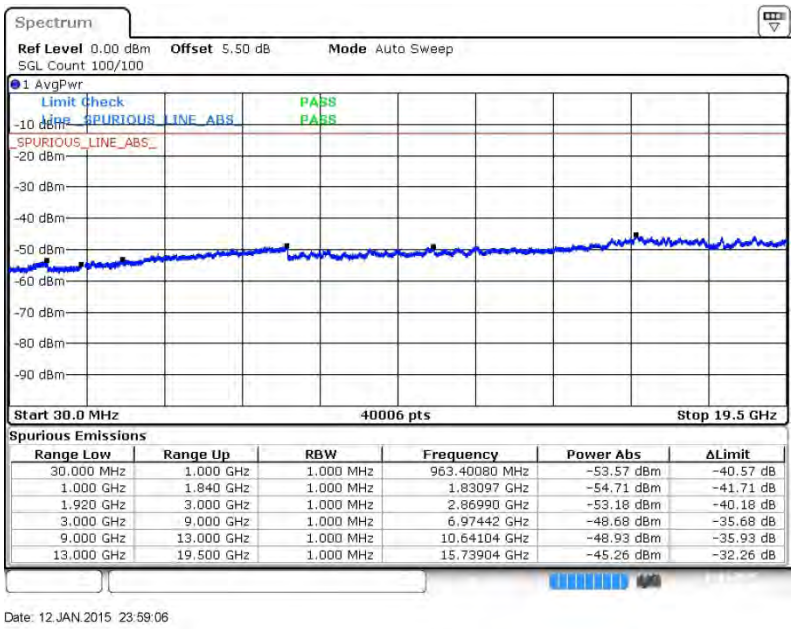


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	906.68416 MHz	-53.95 dBm	-40.95 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.83559 GHz	-54.16 dBm	-41.16 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.84795 GHz	-52.83 dBm	-39.83 dB
3.000 GHz	9.000 GHz	1.000 MHz	5.61353 GHz	-48.39 dBm	-35.39 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.75641 GHz	-49.04 dBm	-36.04 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.73154 GHz	-45.38 dBm	-32.38 dB

Date: 12.JAN.2015 23:58:27

16QAM (RB Size 1, RB Offset 0)



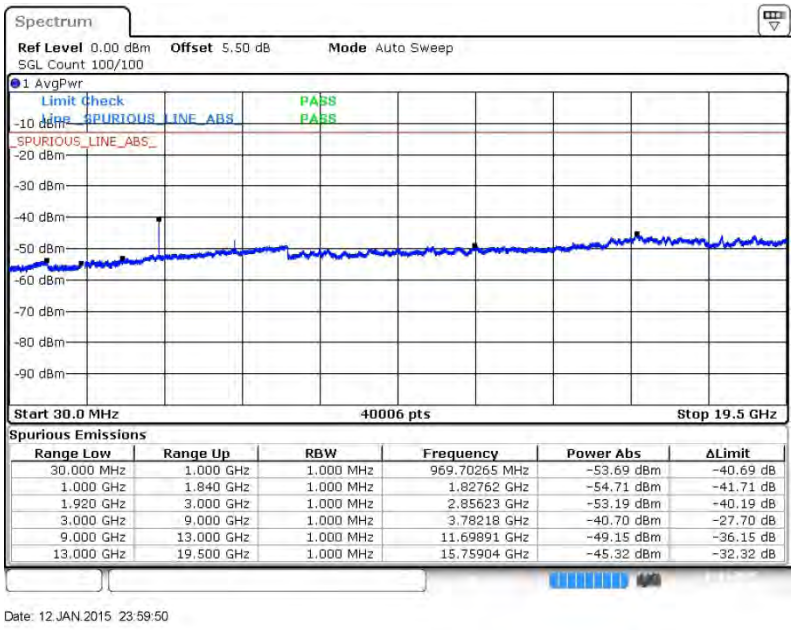
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	963.40080 MHz	-53.57 dBm	-40.57 dB
1.000 GHz	1.840 GHz	1.000 MHz	1.83097 GHz	-54.71 dBm	-41.71 dB
1.920 GHz	3.000 GHz	1.000 MHz	2.86990 GHz	-53.18 dBm	-40.18 dB
3.000 GHz	9.000 GHz	1.000 MHz	6.97442 GHz	-48.68 dBm	-35.68 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.64104 GHz	-48.93 dBm	-35.93 dB
13.000 GHz	19.500 GHz	1.000 MHz	15.73904 GHz	-45.26 dBm	-32.26 dB

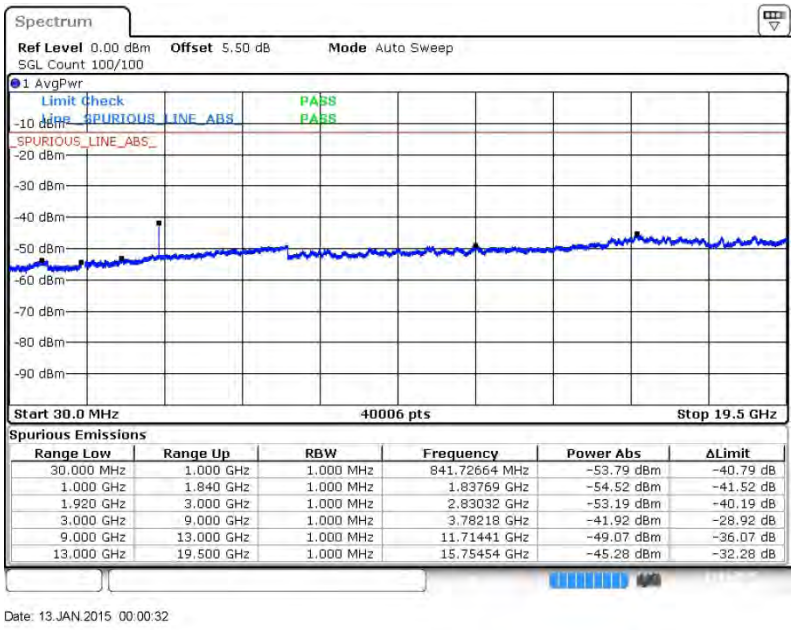
Date: 12.JAN.2015 23:59:06

Band :	LTE Band 2	Channel :	CH19100 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)

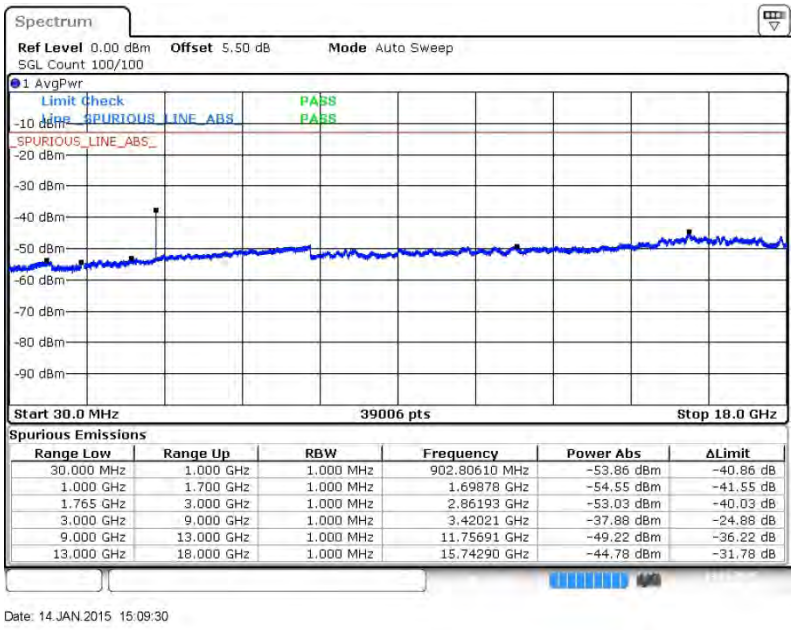


16QAM (RB Size 1, RB Offset 49)

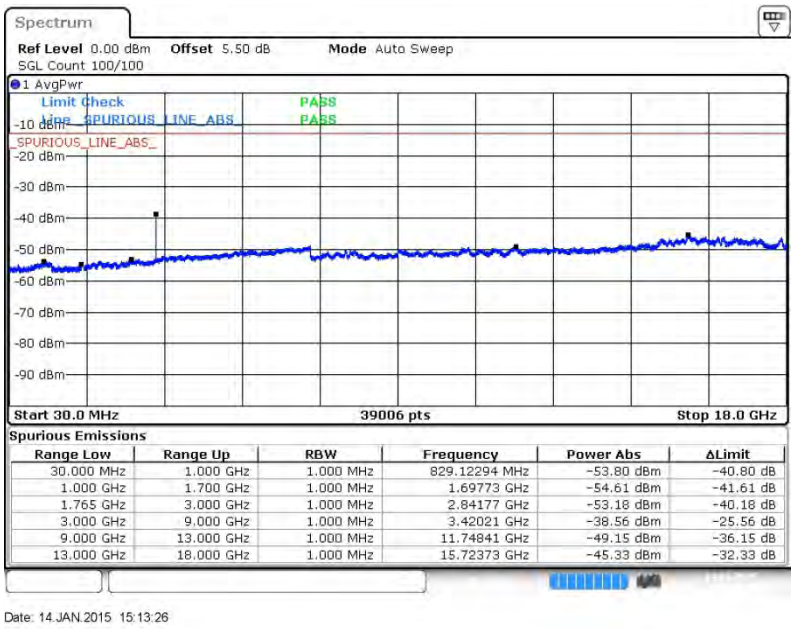


Band :	LTE Band 4	Channel :	CH19957 (Low)
Band Width :	1.4MHz		

QPSK (RB Size 3, RB Offset 0)

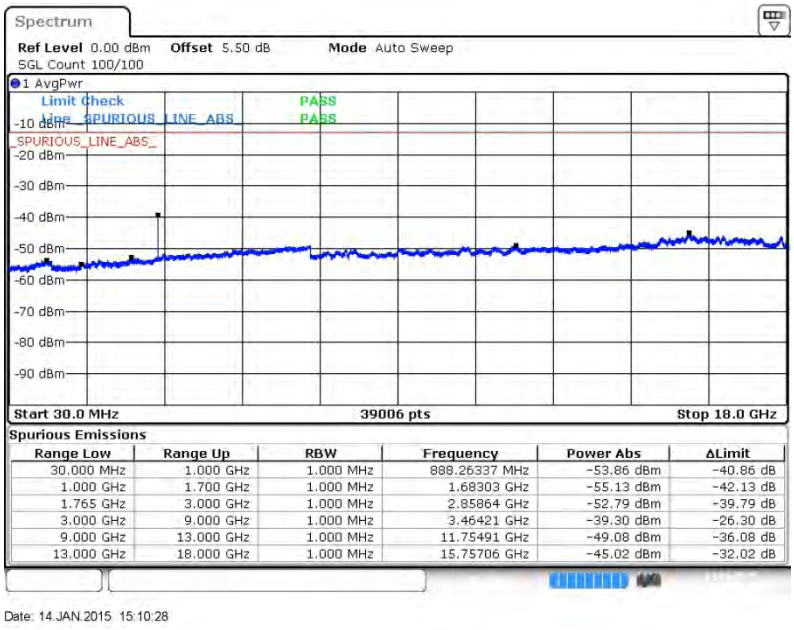


16QAM (RB Size 3, RB Offset 2)



Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	1.4MHz		

QPSK (RB Size 3, RB Offset 2)

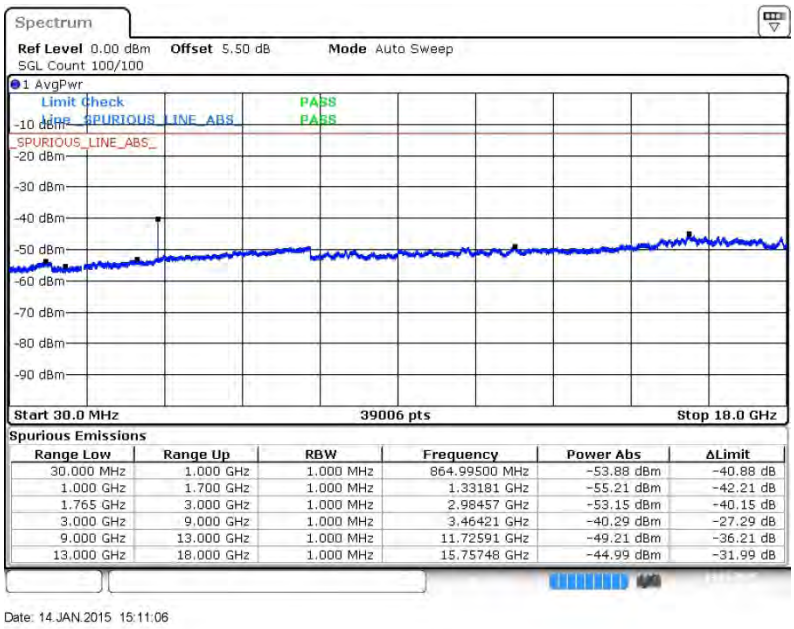


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	888.26337 MHz	-53.86 dBm	-40.86 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68303 GHz	-55.13 dBm	-42.13 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.85864 GHz	-52.79 dBm	-39.79 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.46421 GHz	-39.30 dBm	-26.30 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.75491 GHz	-49.08 dBm	-36.08 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.75706 GHz	-45.02 dBm	-32.02 dB

Date: 14.JAN.2015 15:10:28

16QAM (RB Size 3, RB Offset 2)



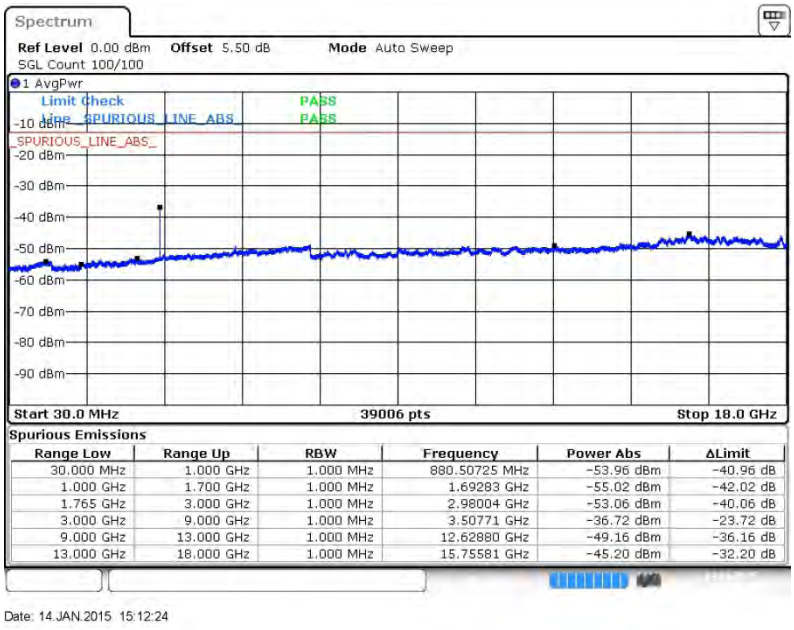
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	864.99500 MHz	-53.88 dBm	-40.88 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.33181 GHz	-55.21 dBm	-42.21 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.98457 GHz	-53.15 dBm	-40.15 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.46421 GHz	-40.29 dBm	-27.29 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.72591 GHz	-49.21 dBm	-36.21 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.75748 GHz	-44.99 dBm	-31.99 dB

Date: 14.JAN.2015 15:11:06

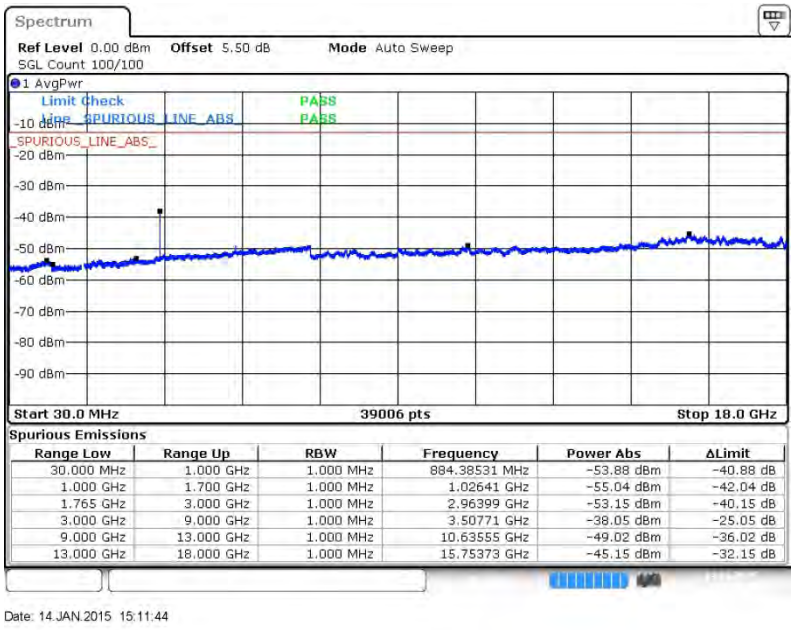
Band :	LTE Band 4	Channel :	CH20393 (High)
Band Width :	1.4MHz		

QPSK (RB Size 1, RB Offset 2)



Date: 14.JAN.2015 15:12:24

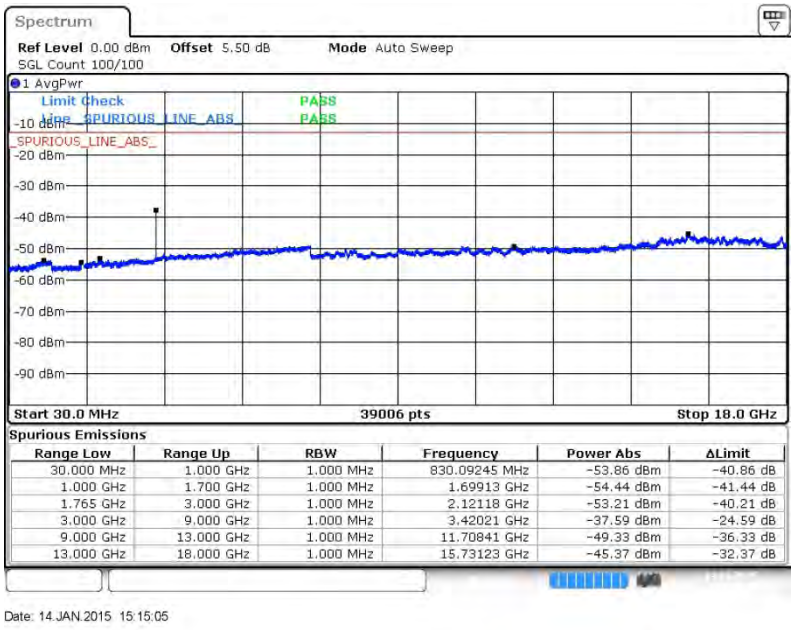
16QAM (RB Size 3, RB Offset 2)



Date: 14.JAN.2015 15:11:44

Band :	LTE Band 4	Channel :	CH19965 (Low)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)

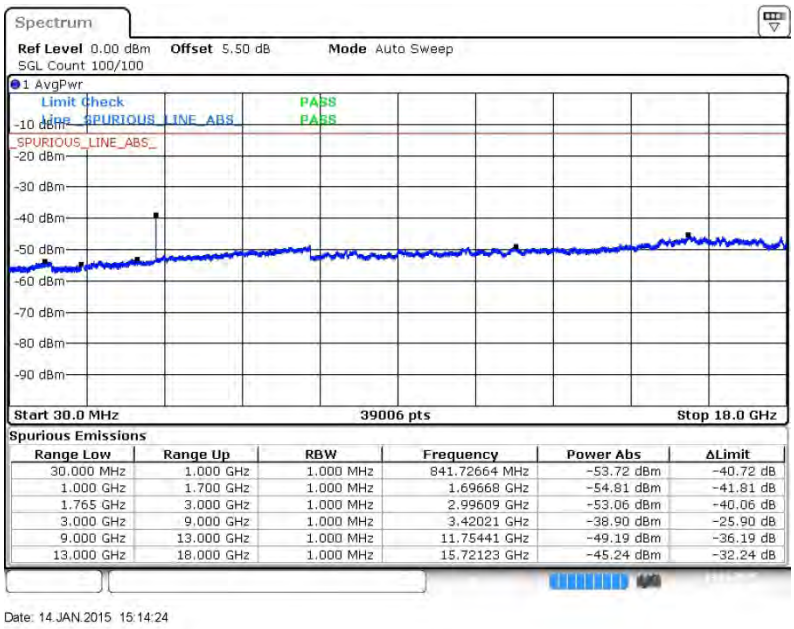


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	830.09245 MHz	-53.86 dBm	-40.86 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69913 GHz	-54.44 dBm	-41.44 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.12118 GHz	-53.21 dBm	-40.21 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42021 GHz	-37.59 dBm	-24.59 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.70841 GHz	-49.33 dBm	-36.33 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.73123 GHz	-45.37 dBm	-32.37 dB

Date: 14.JAN.2015 15:15:05

16QAM (RB Size 1, RB Offset 14)



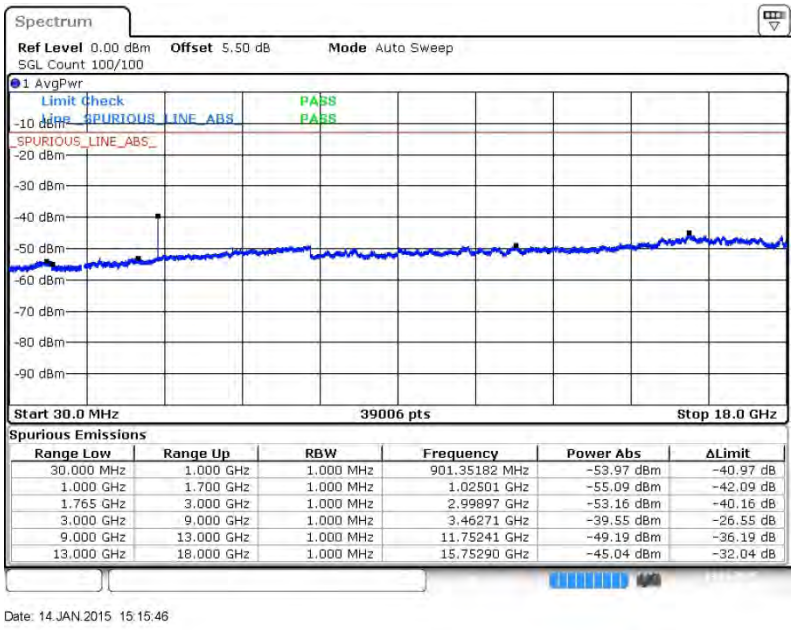
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	841.72664 MHz	-53.72 dBm	-40.72 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69668 GHz	-54.81 dBm	-41.81 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.99609 GHz	-53.06 dBm	-40.06 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42021 GHz	-38.90 dBm	-25.90 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.75441 GHz	-49.19 dBm	-36.19 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.72123 GHz	-45.24 dBm	-32.24 dB

Date: 14.JAN.2015 15:14:24

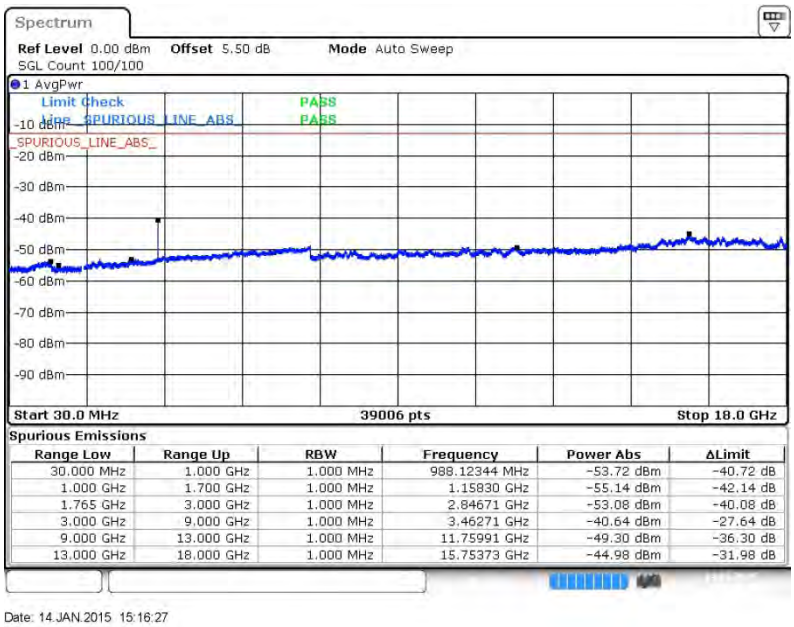
Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.JAN.2015 15:15:46

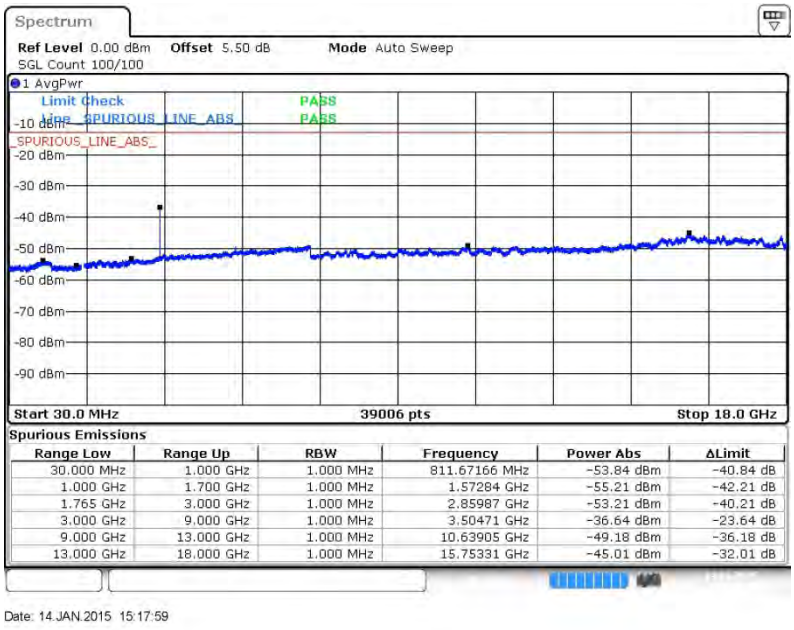
16QAM (RB Size 1, RB Offset 14)



Date: 14.JAN.2015 15:16:27

Band :	LTE Band 4	Channel :	CH20385 (High)
Band Width :	3MHz		

QPSK (RB Size 1, RB Offset 7)

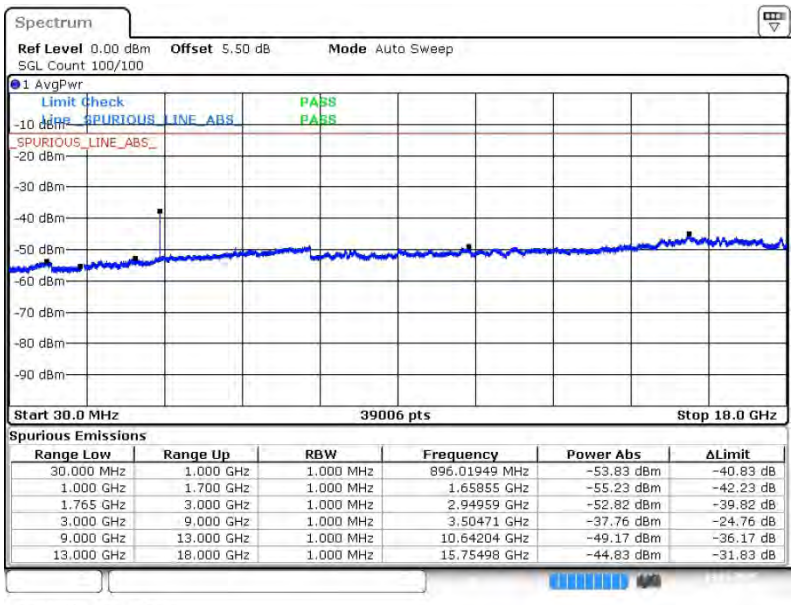


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	811.67166 MHz	-53.84 dBm	-40.84 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.57284 GHz	-55.21 dBm	-42.21 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.85987 GHz	-53.21 dBm	-40.21 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.50471 GHz	-36.64 dBm	-23.64 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.63905 GHz	-49.18 dBm	-36.18 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.75331 GHz	-45.01 dBm	-32.01 dB

Date: 14.JAN.2015 15:17:59

16QAM (RB Size 1, RB Offset 14)



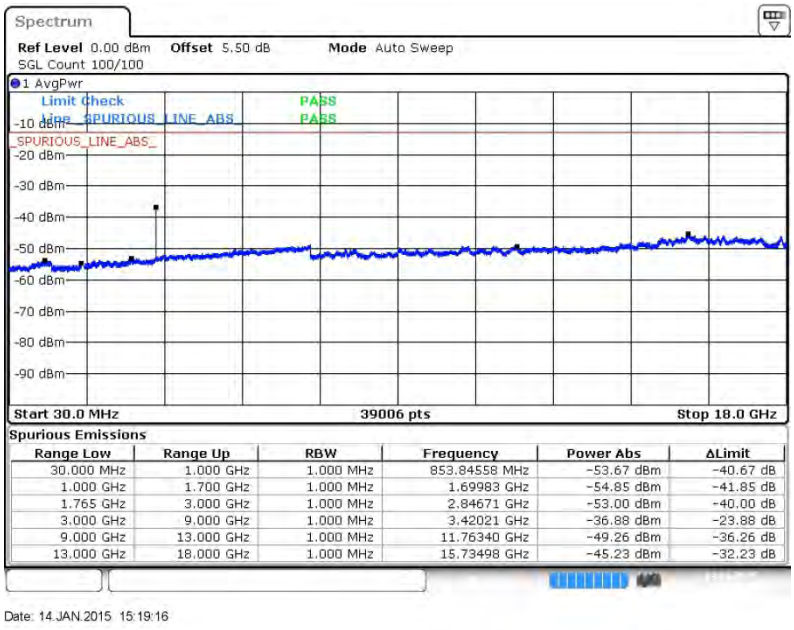
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	896.01949 MHz	-53.83 dBm	-40.83 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.65855 GHz	-55.23 dBm	-42.23 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.94959 GHz	-52.82 dBm	-39.82 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.50471 GHz	-37.76 dBm	-24.76 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.64204 GHz	-49.17 dBm	-36.17 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.75498 GHz	-44.83 dBm	-31.83 dB

Date: 14.JAN.2015 15:17:11

Band :	LTE Band 4	Channel :	CH19975 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)

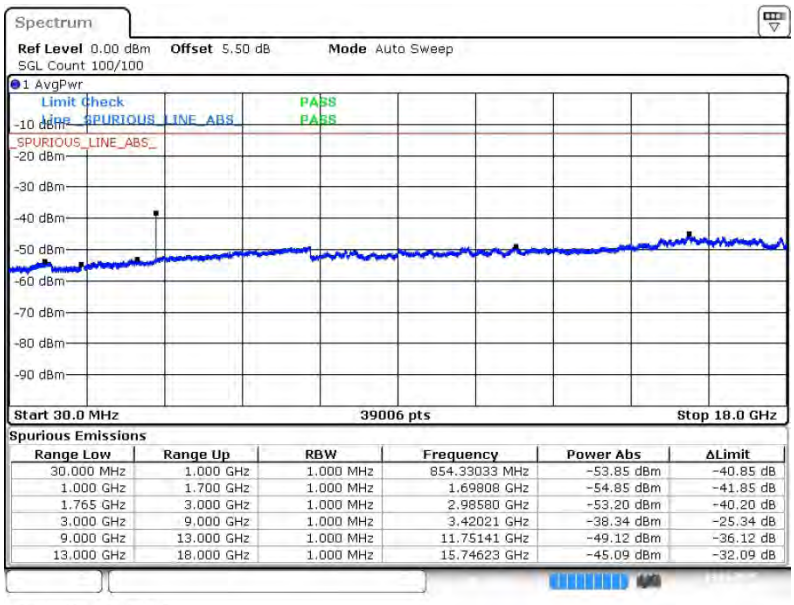


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	853.84558 MHz	-53.67 dBm	-40.67 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69983 GHz	-54.85 dBm	-41.85 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.84671 GHz	-53.00 dBm	-40.00 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42021 GHz	-36.88 dBm	-23.88 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.76340 GHz	-49.26 dBm	-36.26 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.73498 GHz	-45.23 dBm	-32.23 dB

Date: 14.JAN.2015 15:19:16

16QAM (RB Size 1, RB Offset 24)



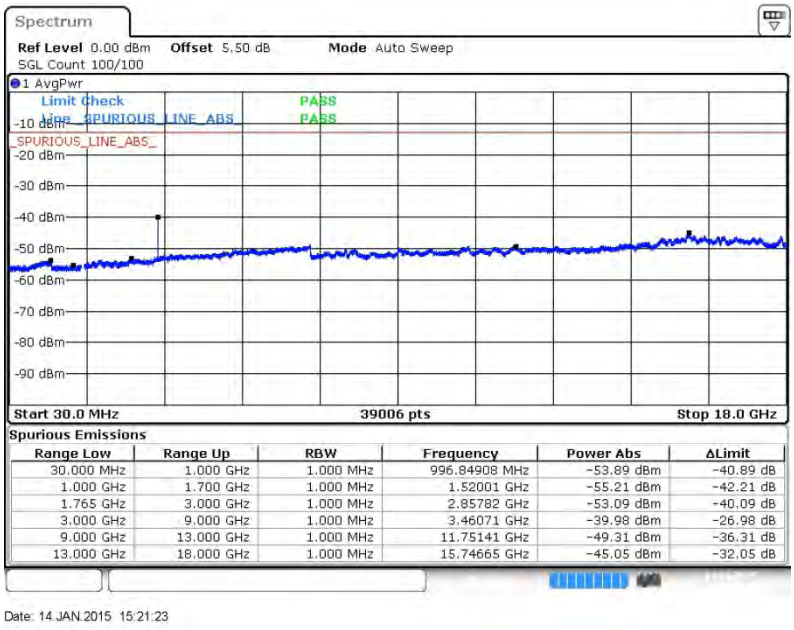
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	854.33033 MHz	-53.85 dBm	-40.85 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69808 GHz	-54.85 dBm	-41.85 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.98580 GHz	-53.20 dBm	-40.20 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42021 GHz	-38.34 dBm	-25.34 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.75141 GHz	-49.12 dBm	-36.12 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.74623 GHz	-45.09 dBm	-32.09 dB

Date: 14.JAN.2015 15:20:04

Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 24)

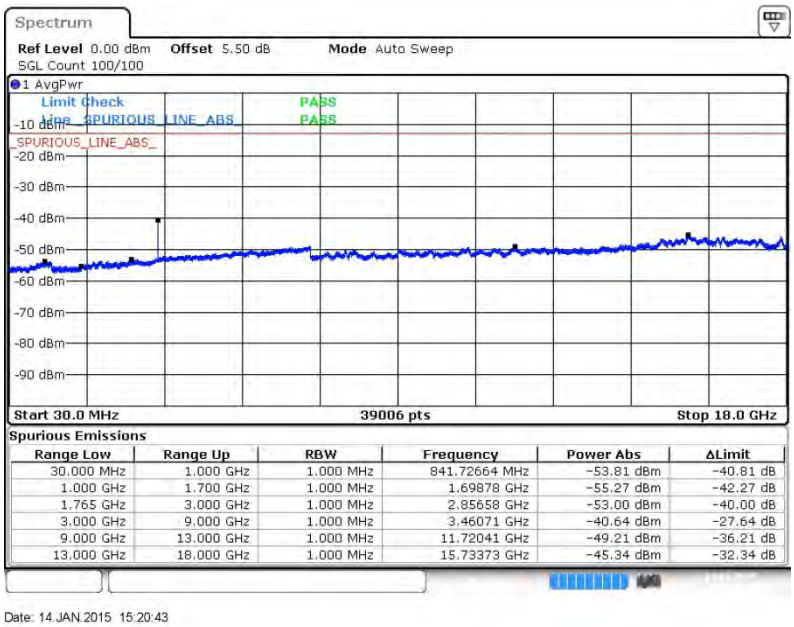


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	996.84908 MHz	-53.89 dBm	-40.89 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.52001 GHz	-55.21 dBm	-42.21 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.85782 GHz	-53.09 dBm	-40.09 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.46071 GHz	-39.98 dBm	-26.98 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.75141 GHz	-49.31 dBm	-36.31 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.74665 GHz	-45.05 dBm	-32.05 dB

Date: 14.JAN.2015 15:21:23

16QAM (RB Size 1, RB Offset 0)



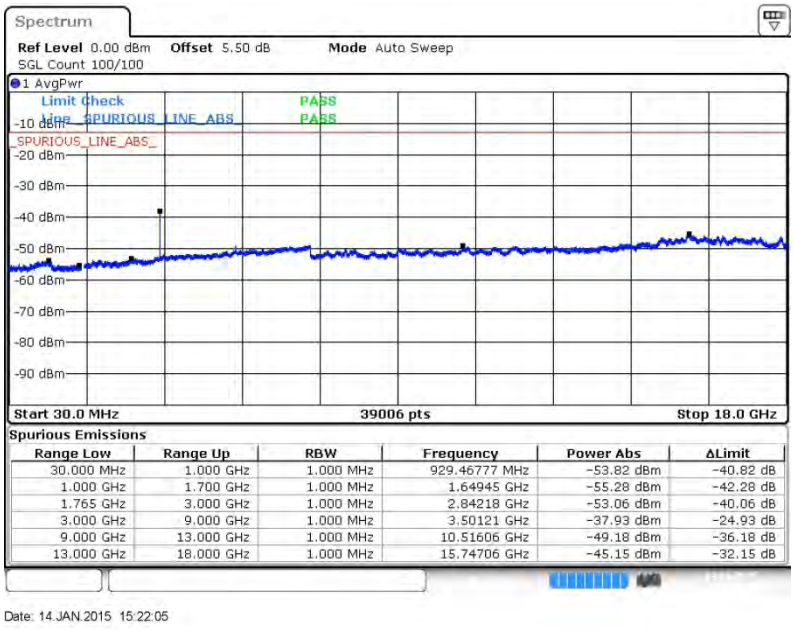
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	841.72664 MHz	-53.81 dBm	-40.81 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69878 GHz	-55.27 dBm	-42.27 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.85658 GHz	-53.00 dBm	-40.00 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.46071 GHz	-40.64 dBm	-27.64 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.72041 GHz	-49.21 dBm	-36.21 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.73373 GHz	-45.34 dBm	-32.34 dB

Date: 14.JAN.2015 15:20:43

Band :	LTE Band 4	Channel :	CH20375 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 24)

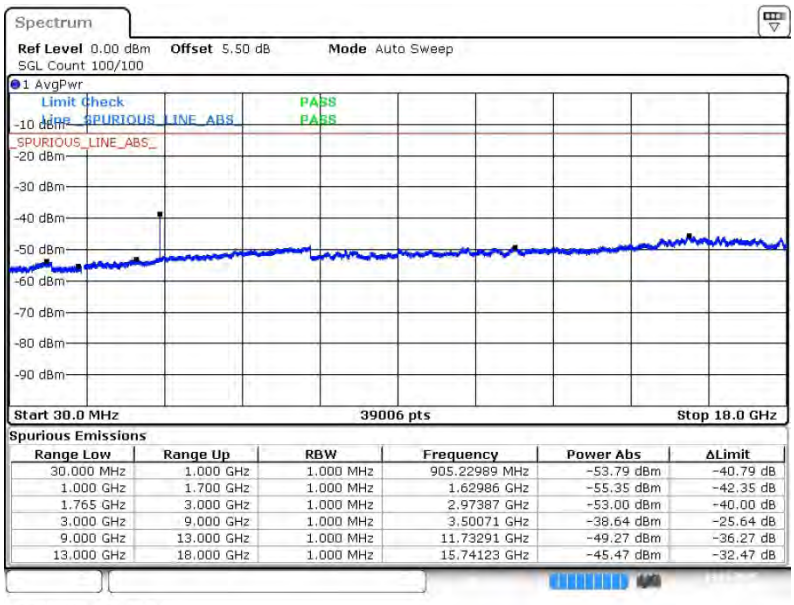


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	929.46777 MHz	-53.82 dBm	-40.82 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.64945 GHz	-55.28 dBm	-42.28 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.84218 GHz	-53.06 dBm	-40.06 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.50121 GHz	-37.93 dBm	-24.93 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.51606 GHz	-49.18 dBm	-36.18 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.74706 GHz	-45.15 dBm	-32.15 dB

Date: 14.JAN.2015 15:22:05

16QAM (RB Size 1, RB Offset 0)



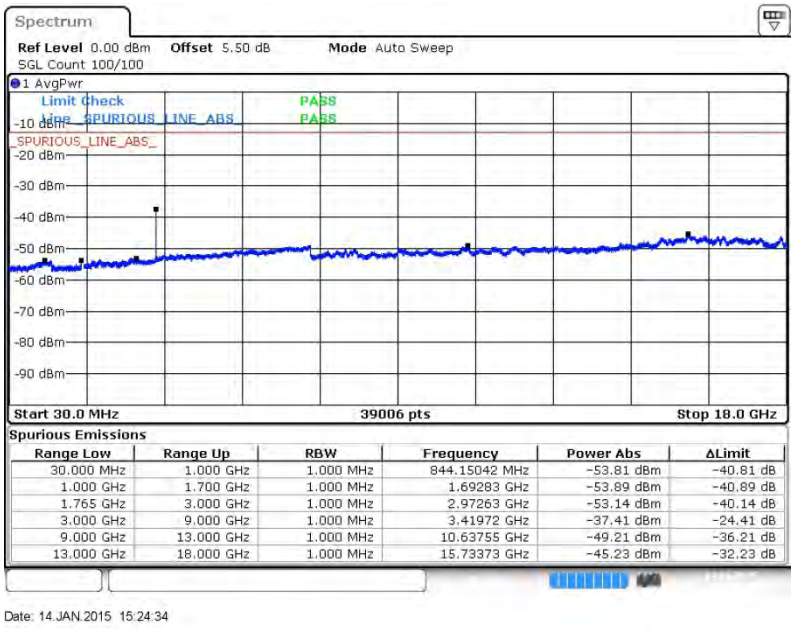
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	905.22989 MHz	-53.79 dBm	-40.79 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.62986 GHz	-55.35 dBm	-42.35 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.97387 GHz	-53.00 dBm	-40.00 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.50071 GHz	-38.64 dBm	-25.64 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.73291 GHz	-49.27 dBm	-36.27 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.74123 GHz	-45.47 dBm	-32.47 dB

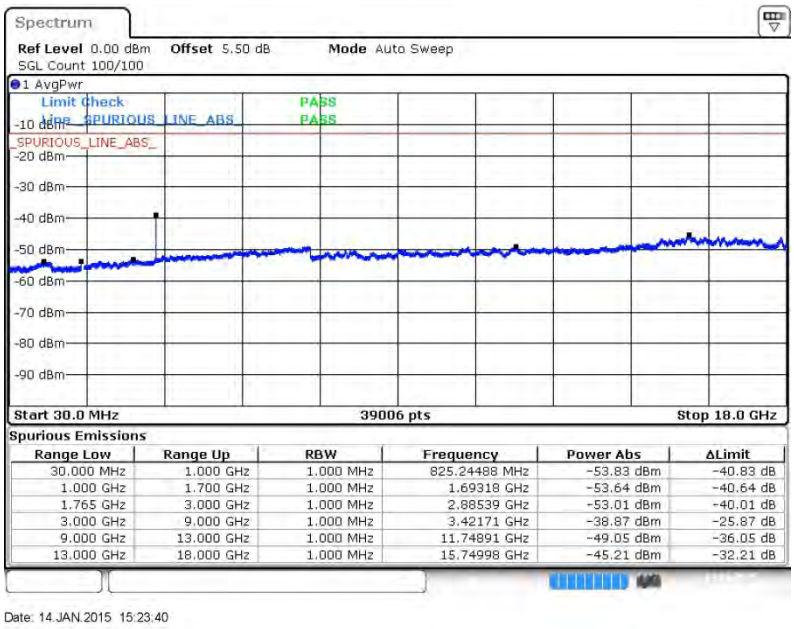
Date: 14.JAN.2015 15:22:51

Band :	LTE Band 4	Channel :	CH20000 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)

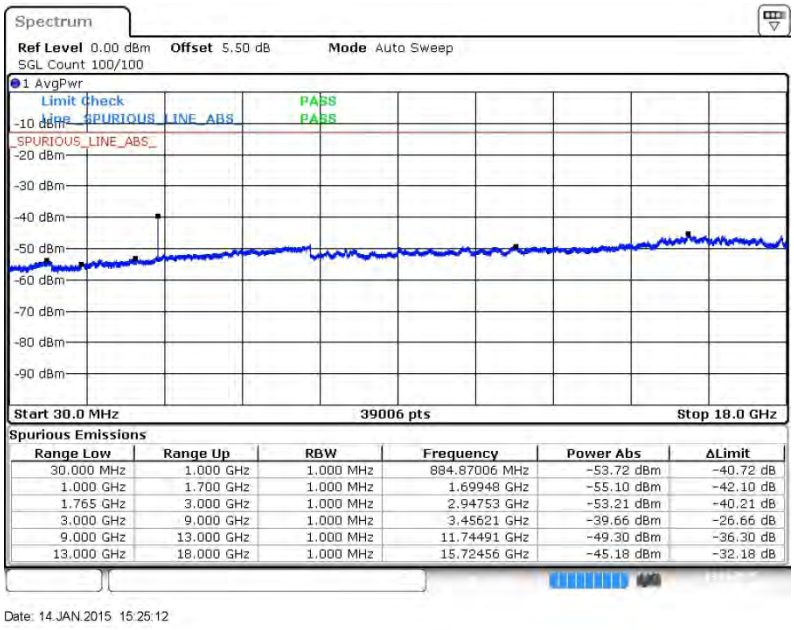


16QAM (RB Size 1, RB Offset 24)

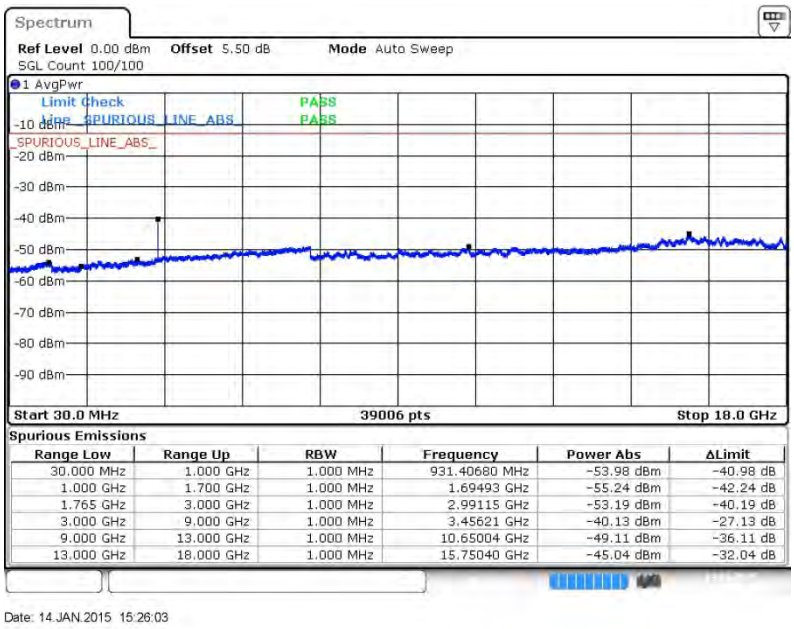


Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)

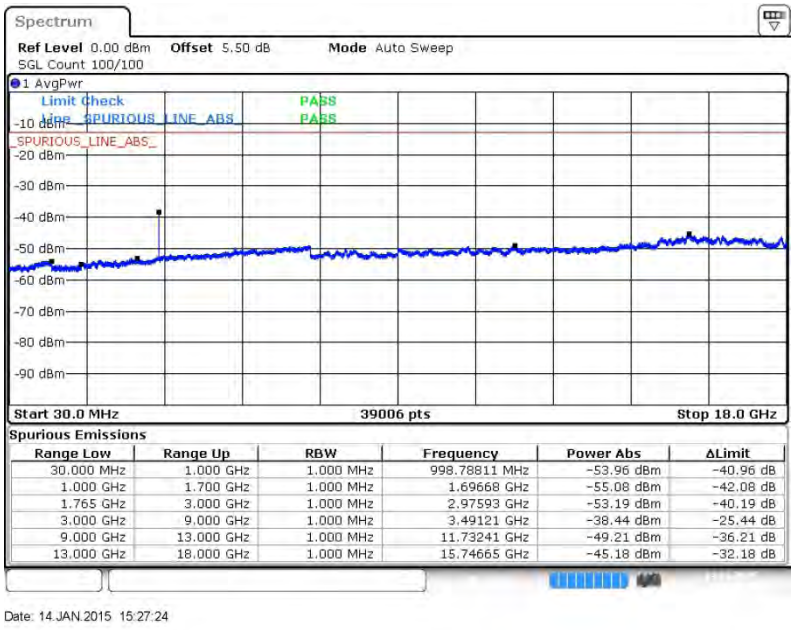


16QAM (RB Size 1, RB Offset 0)



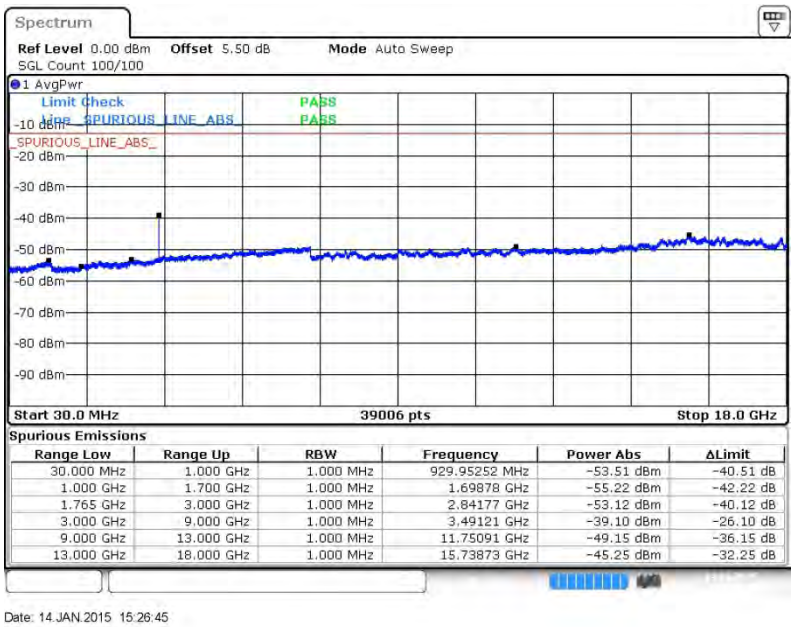
Band :	LTE Band 4	Channel :	CH20350 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)



Date: 14.JAN.2015 15:27:24

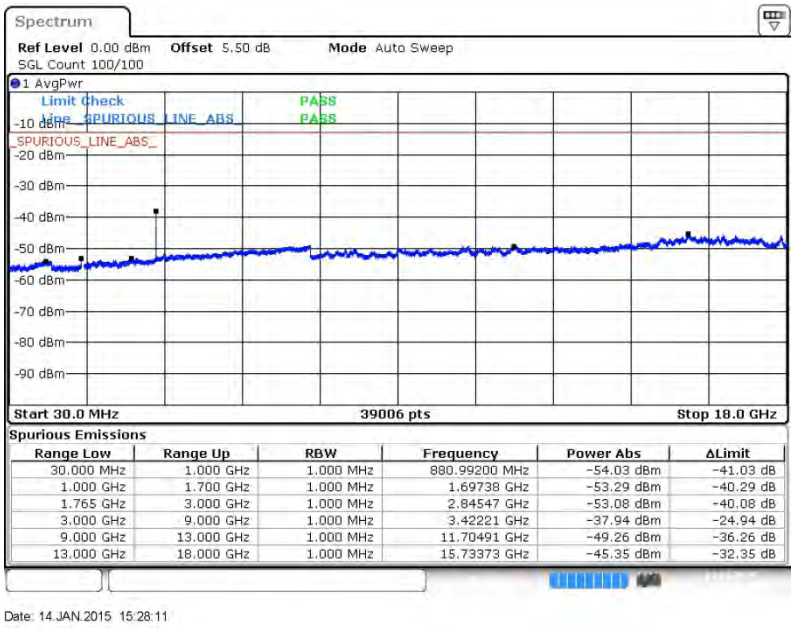
16QAM (RB Size 1, RB Offset 24)



Date: 14.JAN.2015 15:26:45

Band :	LTE Band 4	Channel :	CH20025 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 74)

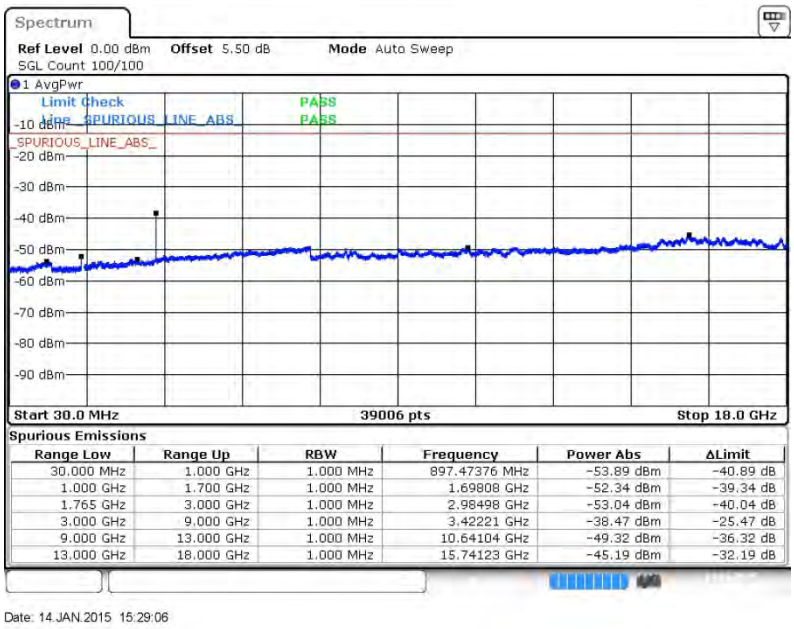


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	880.99200 MHz	-54.03 dBm	-41.03 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69738 GHz	-53.29 dBm	-40.29 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.84547 GHz	-53.08 dBm	-40.08 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42221 GHz	-37.94 dBm	-24.94 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.70491 GHz	-49.26 dBm	-36.26 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.73373 GHz	-45.35 dBm	-32.35 dB

Date: 14.JAN.2015 15:28:11

16QAM (RB Size 1, RB Offset 0)



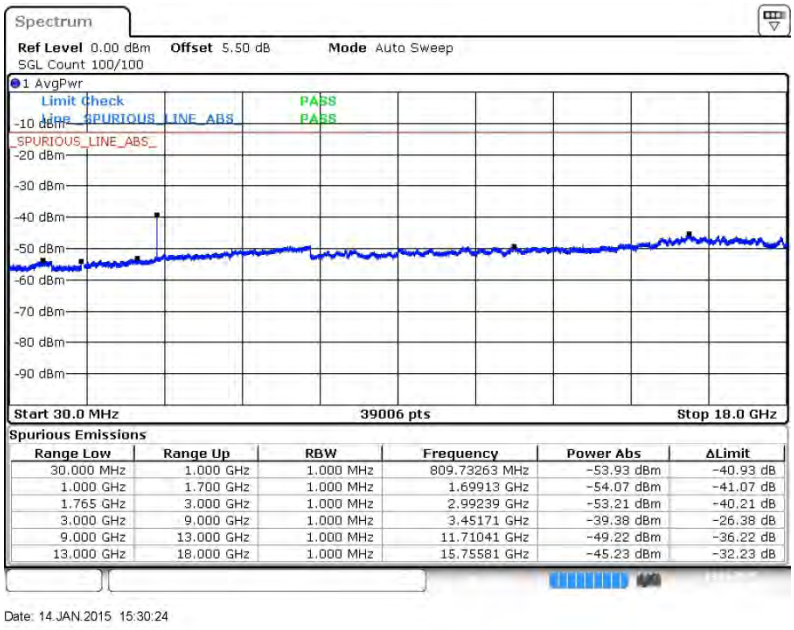
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	897.47376 MHz	-53.89 dBm	-40.89 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69808 GHz	-52.34 dBm	-39.34 dB
1.765 GHz	3.000 GHz	1.000 MHz	2.98498 GHz	-53.04 dBm	-40.04 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.42221 GHz	-38.47 dBm	-25.47 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.64104 GHz	-49.32 dBm	-36.32 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.74123 GHz	-45.19 dBm	-32.19 dB

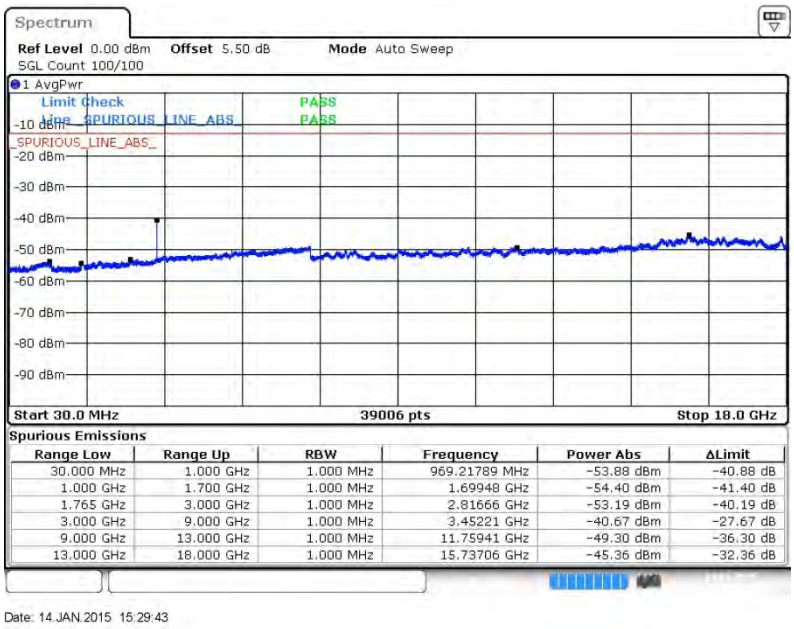
Date: 14.JAN.2015 15:29:06

Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 74)

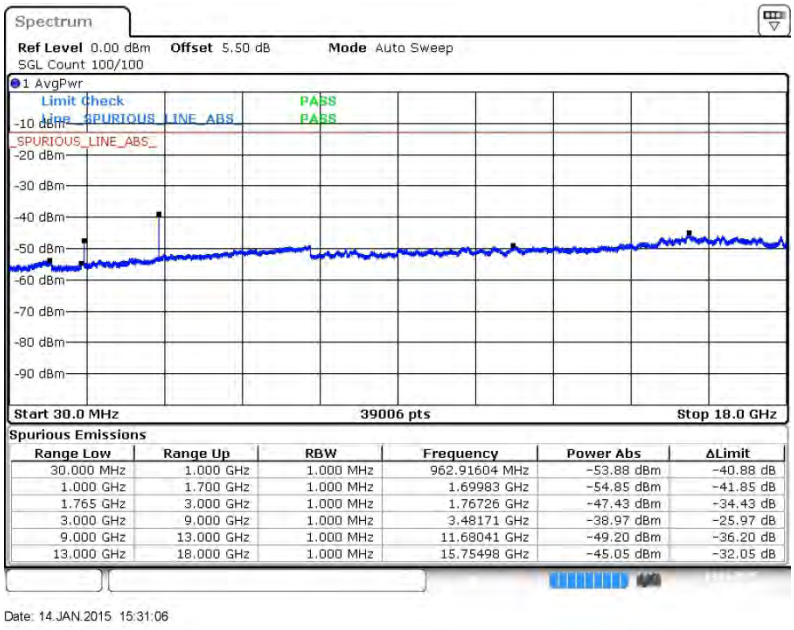


16QAM (RB Size 1, RB Offset 0)



Band :	LTE Band 4	Channel :	CH20325 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)

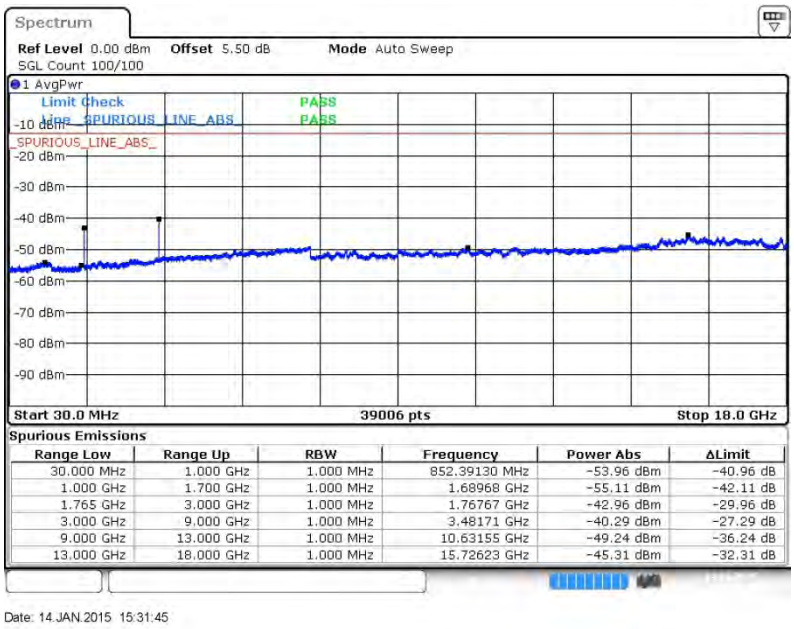


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	962.91604 MHz	-53.88 dBm	-40.88 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69983 GHz	-54.85 dBm	-41.85 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.76726 GHz	-47.43 dBm	-34.43 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.48171 GHz	-38.97 dBm	-25.97 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.68041 GHz	-49.20 dBm	-36.20 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.75498 GHz	-45.05 dBm	-32.05 dB

Date: 14.JAN.2015 15:31:06

16QAM (RB Size 1, RB Offset 0)



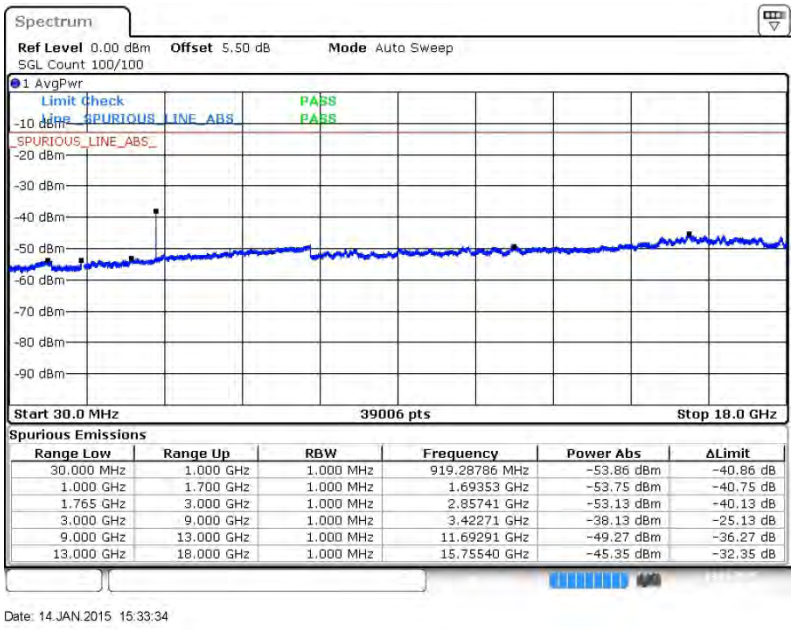
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	852.39130 MHz	-53.96 dBm	-40.96 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.68968 GHz	-55.11 dBm	-42.11 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.76767 GHz	-42.96 dBm	-29.96 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.48171 GHz	-40.29 dBm	-27.29 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.63155 GHz	-49.24 dBm	-36.24 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.72623 GHz	-45.31 dBm	-32.31 dB

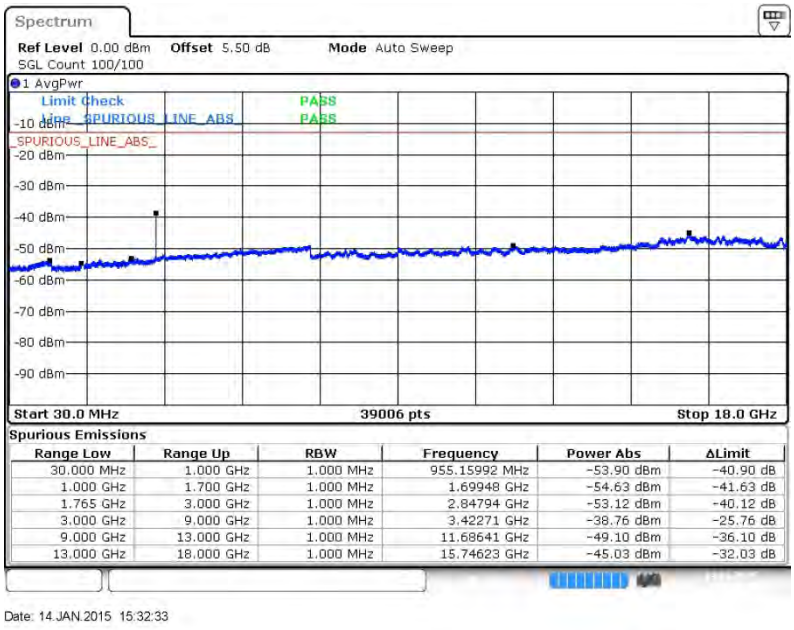
Date: 14.JAN.2015 15:31:45

Band :	LTE Band 4	Channel :	CH20050 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)

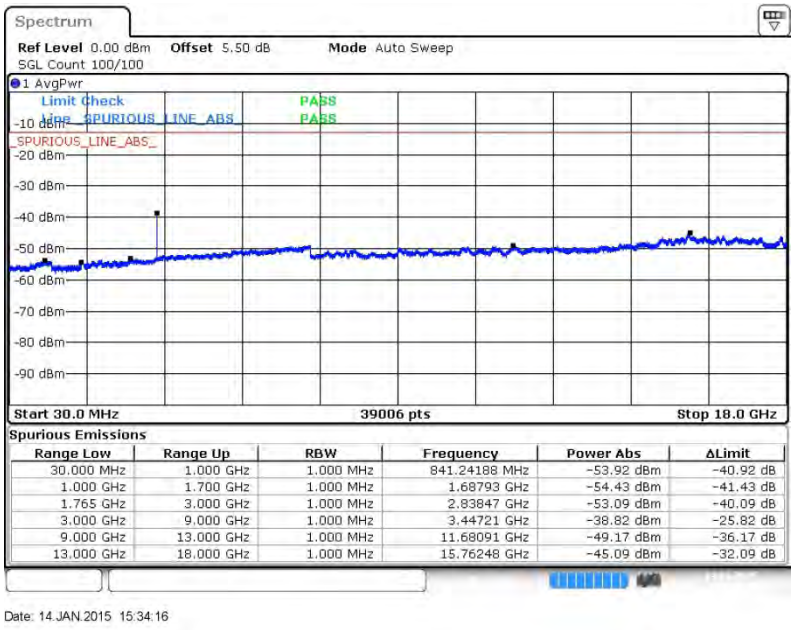


16QAM (RB Size 1, RB Offset 0)

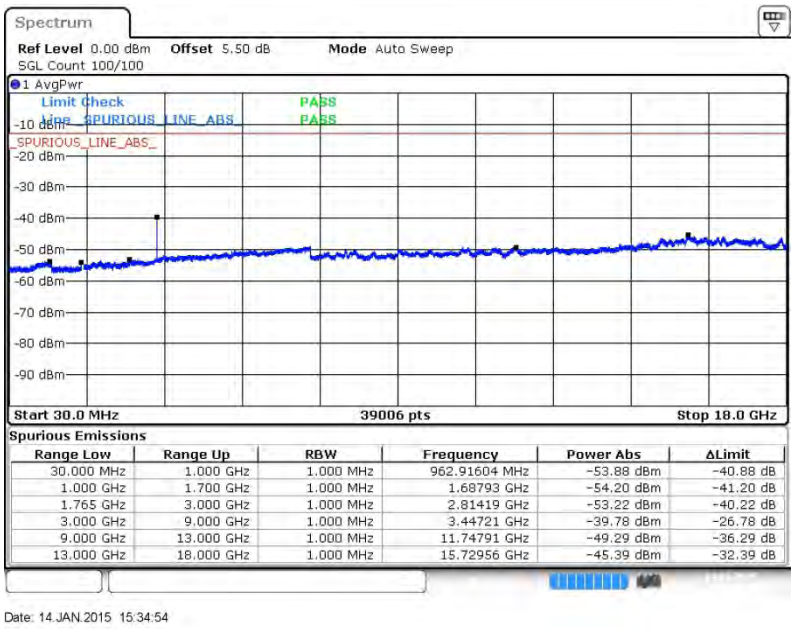


Band :	LTE Band 4	Channel :	CH20175 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)

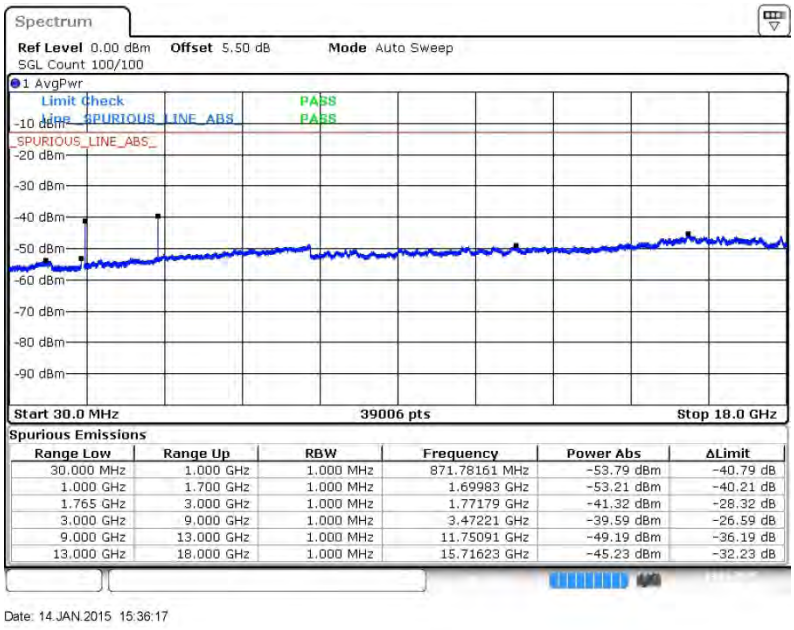


16QAM (RB Size 1, RB Offset 0)



Band :	LTE Band 4	Channel :	CH20300 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)

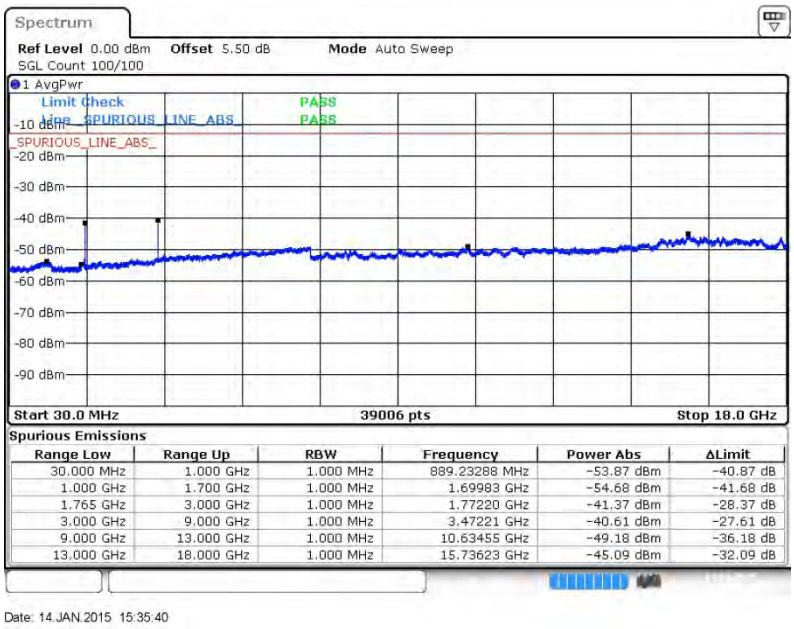


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	871.78161 MHz	-53.79 dBm	-40.79 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69983 GHz	-53.21 dBm	-40.21 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.77179 GHz	-41.32 dBm	-28.32 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.47221 GHz	-39.59 dBm	-26.59 dB
9.000 GHz	13.000 GHz	1.000 MHz	11.75091 GHz	-49.19 dBm	-36.19 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.71623 GHz	-45.23 dBm	-32.23 dB

Date: 14.JAN.2015 15:36:17

16QAM (RB Size 1, RB Offset 0)



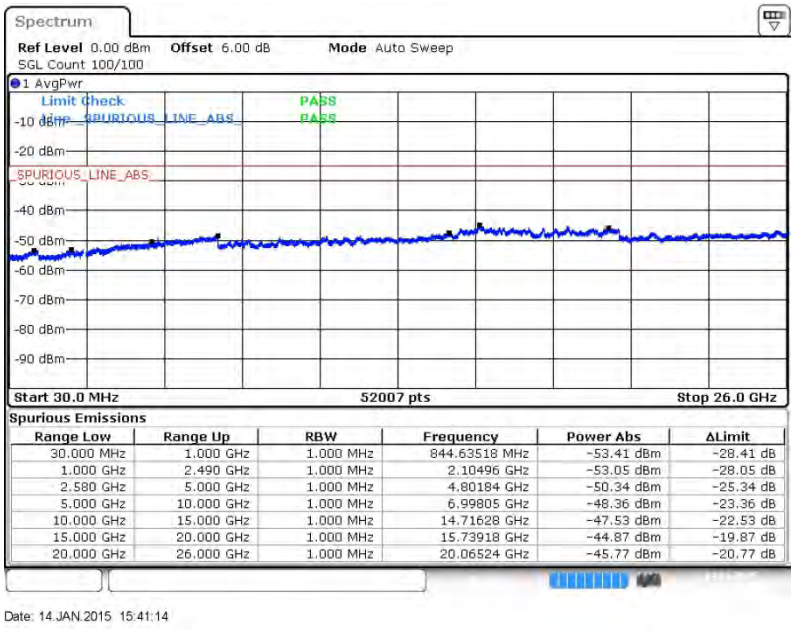
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	889.23288 MHz	-53.87 dBm	-40.87 dB
1.000 GHz	1.700 GHz	1.000 MHz	1.69983 GHz	-54.68 dBm	-41.68 dB
1.765 GHz	3.000 GHz	1.000 MHz	1.77220 GHz	-41.37 dBm	-28.37 dB
3.000 GHz	9.000 GHz	1.000 MHz	3.47221 GHz	-40.61 dBm	-27.61 dB
9.000 GHz	13.000 GHz	1.000 MHz	10.63455 GHz	-49.18 dBm	-36.18 dB
13.000 GHz	18.000 GHz	1.000 MHz	15.73623 GHz	-45.09 dBm	-32.09 dB

Date: 14.JAN.2015 15:35:40

Band :	LTE Band 7	Channel :	CH20775 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 12)

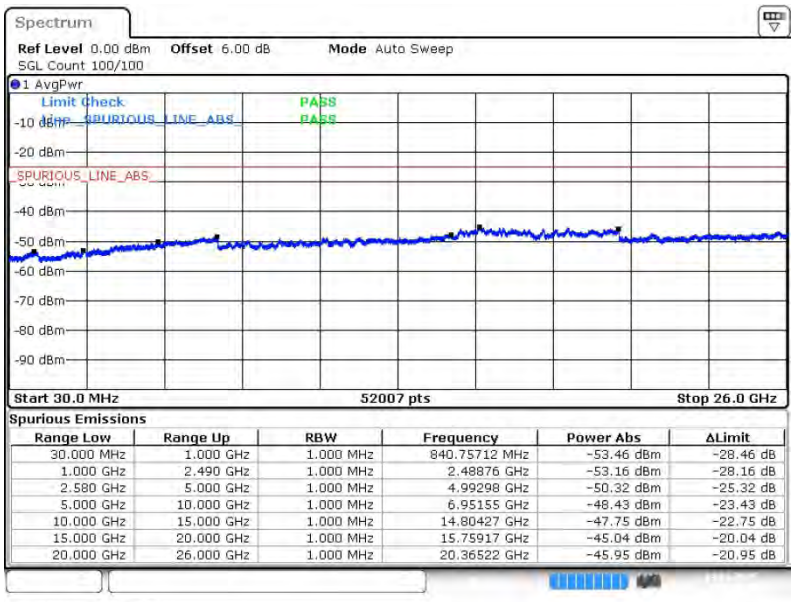


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	844.63518 MHz	-53.41 dBm	-28.41 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.10496 GHz	-53.05 dBm	-28.05 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.80184 GHz	-50.34 dBm	-25.34 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99805 GHz	-48.36 dBm	-23.36 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.71628 GHz	-47.53 dBm	-22.53 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.73918 GHz	-44.87 dBm	-19.87 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.06524 GHz	-45.77 dBm	-20.77 dB

Date: 14.JAN.2015 15:41:14

16QAM (RB Size 1, RB Offset 24)



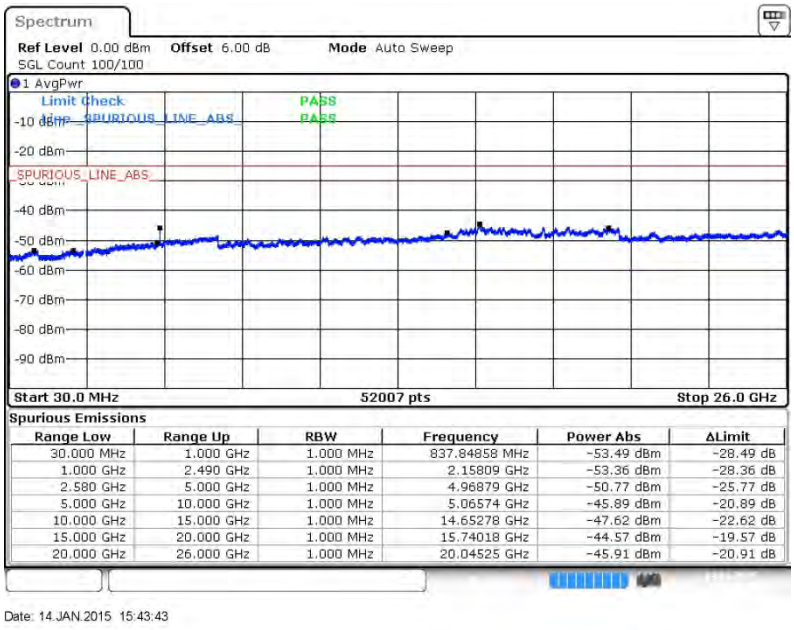
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	840.75712 MHz	-53.46 dBm	-28.46 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48876 GHz	-53.16 dBm	-28.16 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.99298 GHz	-50.32 dBm	-25.32 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.95155 GHz	-48.43 dBm	-23.43 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.80427 GHz	-47.75 dBm	-22.75 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.75917 GHz	-45.04 dBm	-20.04 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.36522 GHz	-45.95 dBm	-20.95 dB

Date: 14.JAN.2015 15:42:04

Band :	LTE Band 7	Channel :	CH21100 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)

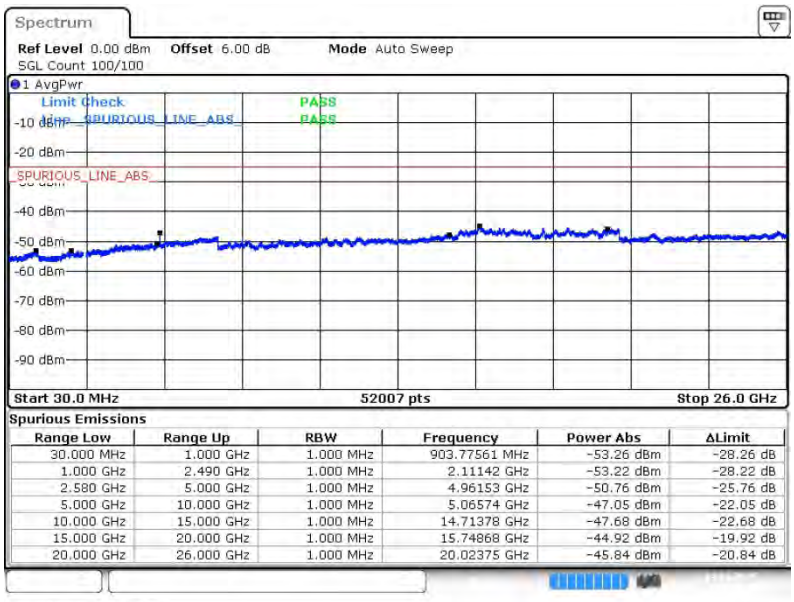


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	837.84858 MHz	-53.49 dBm	-28.49 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.15809 GHz	-53.36 dBm	-28.36 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.96879 GHz	-50.77 dBm	-25.77 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.06574 GHz	-45.89 dBm	-20.89 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.65278 GHz	-47.62 dBm	-22.62 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.74018 GHz	-44.57 dBm	-19.57 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.04525 GHz	-45.91 dBm	-20.91 dB

Date: 14.JAN.2015 15:43:43

16QAM (RB Size 1, RB Offset 24)



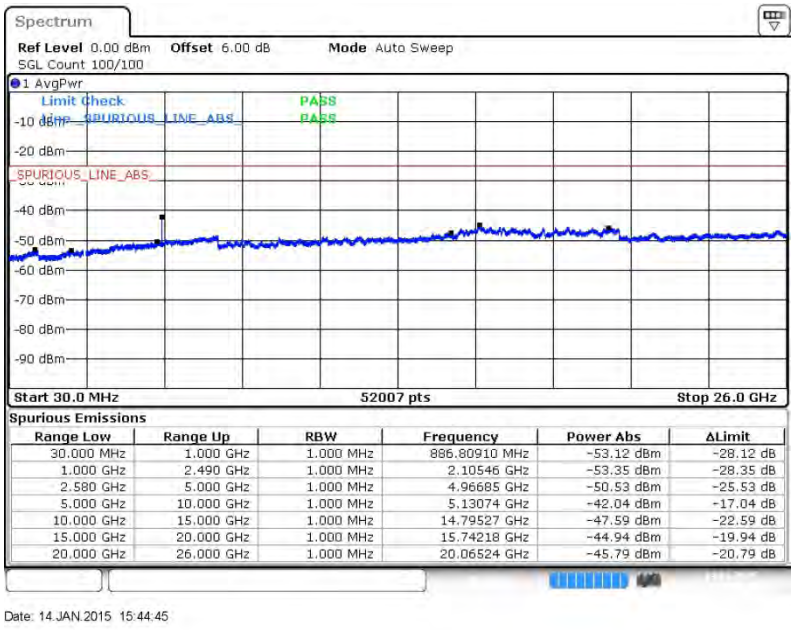
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	903.77561 MHz	-53.26 dBm	-28.26 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.11142 GHz	-53.22 dBm	-28.22 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.96153 GHz	-50.76 dBm	-25.76 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.06574 GHz	-47.05 dBm	-22.05 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.71378 GHz	-47.68 dBm	-22.68 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.74868 GHz	-44.92 dBm	-19.92 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.02375 GHz	-45.84 dBm	-20.84 dB

Date: 14.JAN.2015 15:42:52

Band :	LTE Band 7	Channel :	CH21425 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 24)

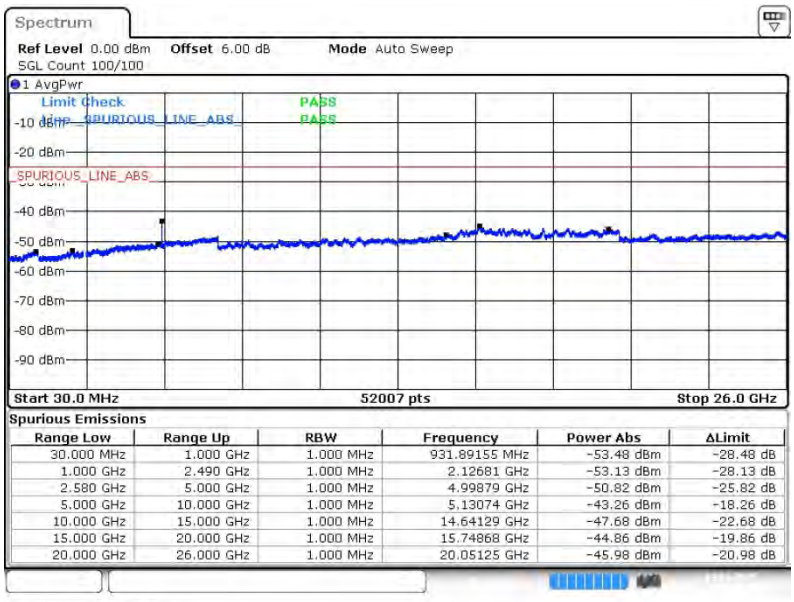


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	886.80910 MHz	-53.12 dBm	-28.12 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.10546 GHz	-53.35 dBm	-28.35 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.96685 GHz	-50.53 dBm	-25.53 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.13074 GHz	-42.04 dBm	-17.04 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.79527 GHz	-47.59 dBm	-22.59 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.74218 GHz	-44.94 dBm	-19.94 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.06524 GHz	-45.79 dBm	-20.79 dB

Date: 14.JAN.2015 15:44:45

16QAM (RB Size 1, RB Offset 0)



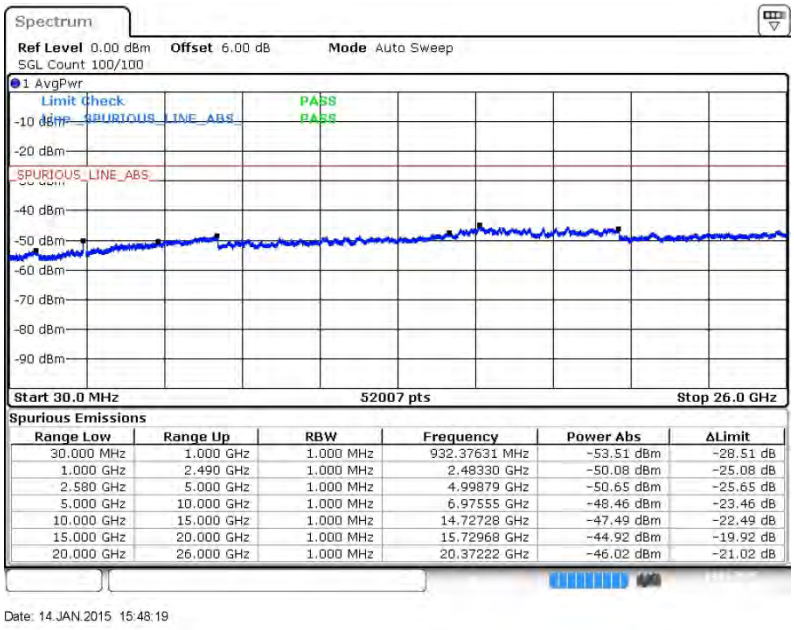
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	931.89155 MHz	-53.48 dBm	-28.48 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.12681 GHz	-53.13 dBm	-28.13 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.99879 GHz	-50.82 dBm	-25.82 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.13074 GHz	-43.26 dBm	-18.26 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.64129 GHz	-47.68 dBm	-22.68 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.74868 GHz	-44.86 dBm	-19.86 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.05125 GHz	-45.98 dBm	-20.98 dB

Date: 14.JAN.2015 15:46:27

Band :	LTE Band 7	Channel :	CH20800 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)

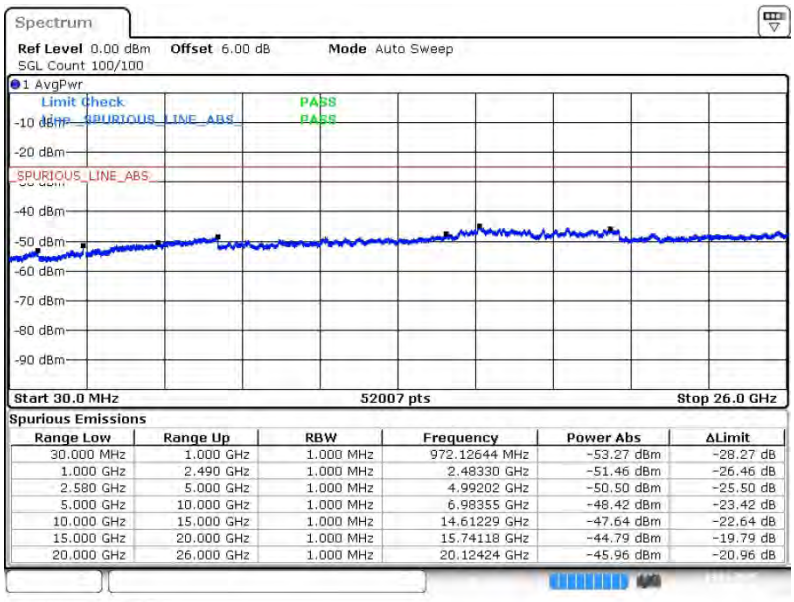


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	932.37631 MHz	-53.51 dBm	-28.51 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48330 GHz	-50.08 dBm	-25.08 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.99879 GHz	-50.65 dBm	-25.65 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.97555 GHz	-48.46 dBm	-23.46 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.72728 GHz	-47.49 dBm	-22.49 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.72968 GHz	-44.92 dBm	-19.92 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.37222 GHz	-46.02 dBm	-21.02 dB

Date: 14.JAN.2015 15:48:19

16QAM (RB Size 1, RB Offset 24)



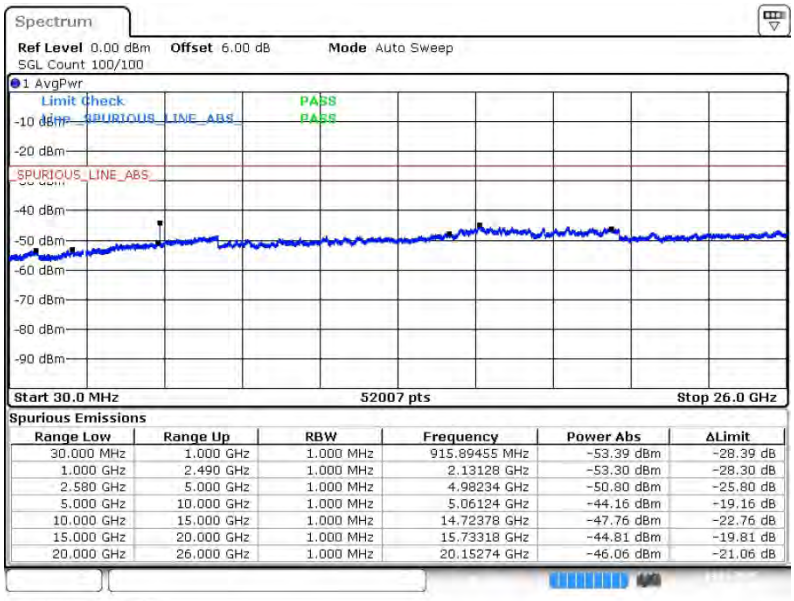
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	972.12644 MHz	-53.27 dBm	-28.27 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48330 GHz	-51.46 dBm	-26.46 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.99202 GHz	-50.50 dBm	-25.50 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.98355 GHz	-48.42 dBm	-23.42 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.61229 GHz	-47.64 dBm	-22.64 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.74118 GHz	-44.79 dBm	-19.79 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.12424 GHz	-45.96 dBm	-20.96 dB

Date: 14.JAN.2015 15:47:31

Band :	LTE Band 7	Channel :	CH21100 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 49)

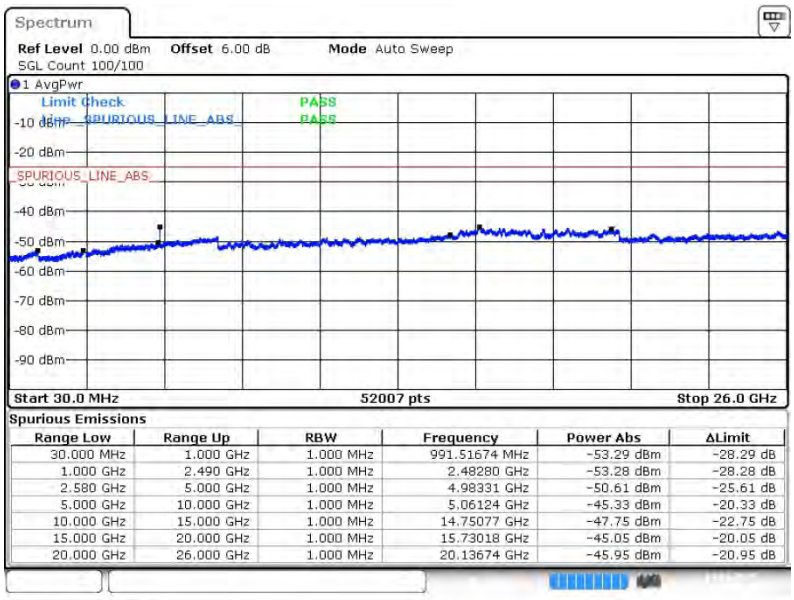


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	915.89455 MHz	-53.39 dBm	-28.39 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.13128 GHz	-53.30 dBm	-28.30 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.98234 GHz	-50.80 dBm	-25.80 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.06124 GHz	-44.16 dBm	-19.16 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.72378 GHz	-47.76 dBm	-22.76 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.73318 GHz	-44.81 dBm	-19.81 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.15274 GHz	-46.06 dBm	-21.06 dB

Date: 14.JAN.2015 15:49:09

16QAM (RB Size 1, RB Offset 49)



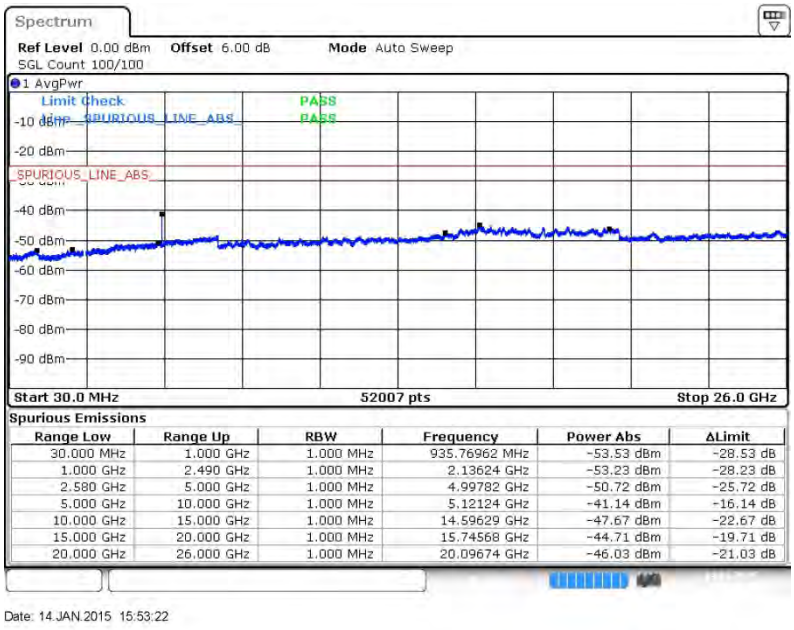
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	991.51674 MHz	-53.29 dBm	-28.29 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48280 GHz	-53.28 dBm	-28.28 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.98331 GHz	-50.61 dBm	-25.61 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.06124 GHz	-45.33 dBm	-20.33 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.75077 GHz	-47.75 dBm	-22.75 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.73018 GHz	-45.05 dBm	-20.05 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.13674 GHz	-45.95 dBm	-20.95 dB

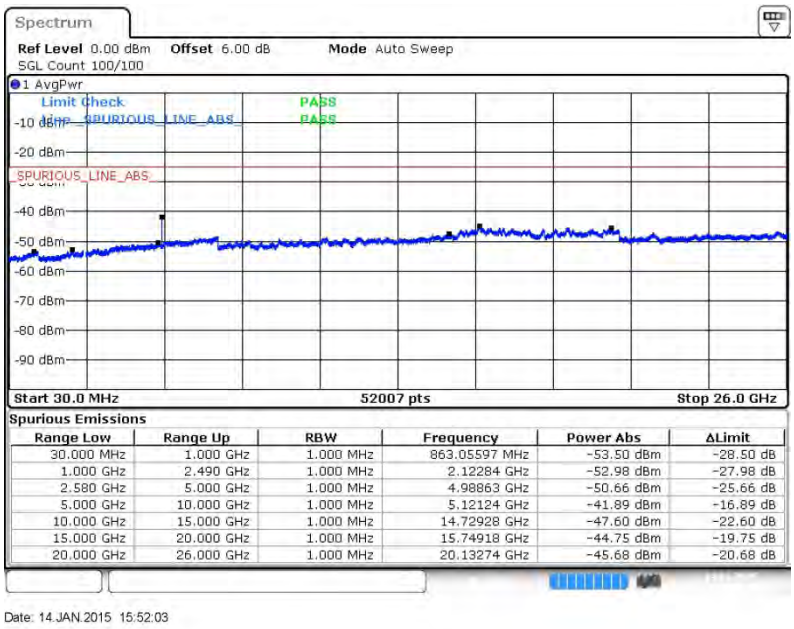
Date: 14.JAN.2015 15:51:05

Band :	LTE Band 7	Channel :	CH21400 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 24)

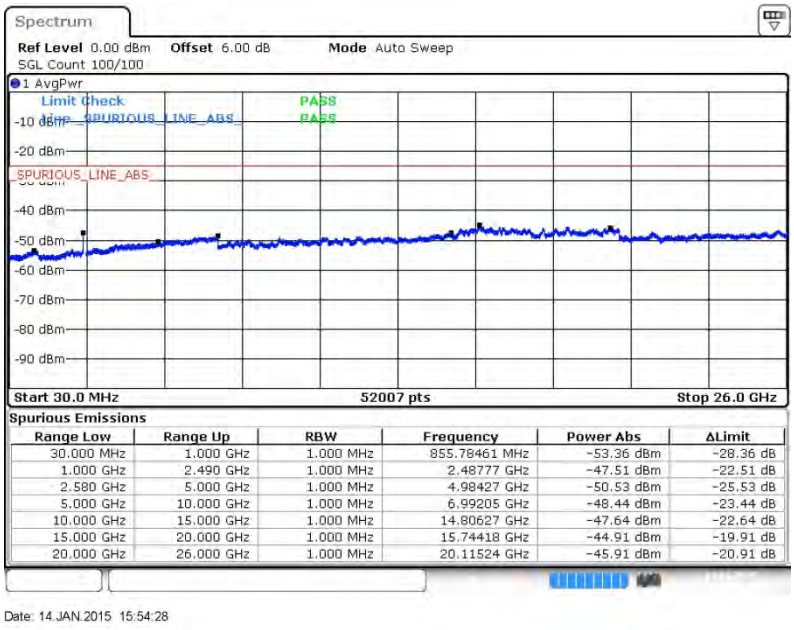


16QAM (RB Size 1, RB Offset 24)



Band :	LTE Band 7	Channel :	CH20825 (Low)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 37)

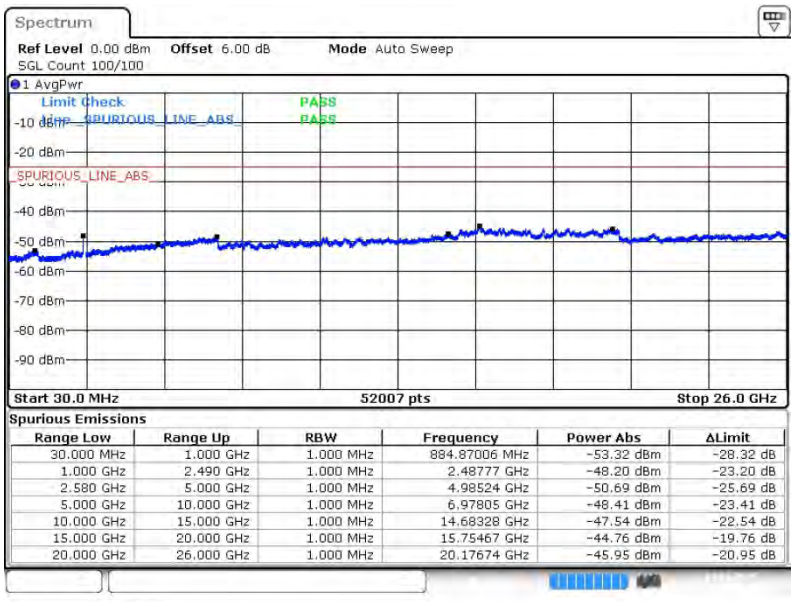


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	855.78461 MHz	-53.36 dBm	-28.36 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48777 GHz	-47.51 dBm	-22.51 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.98427 GHz	-50.53 dBm	-25.53 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.99205 GHz	-48.44 dBm	-23.44 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.80627 GHz	-47.64 dBm	-22.64 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.74418 GHz	-44.91 dBm	-19.91 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.11524 GHz	-45.91 dBm	-20.91 dB

Date: 14.JAN.2015 15:54:28

16QAM (RB Size 36, RB Offset 37)



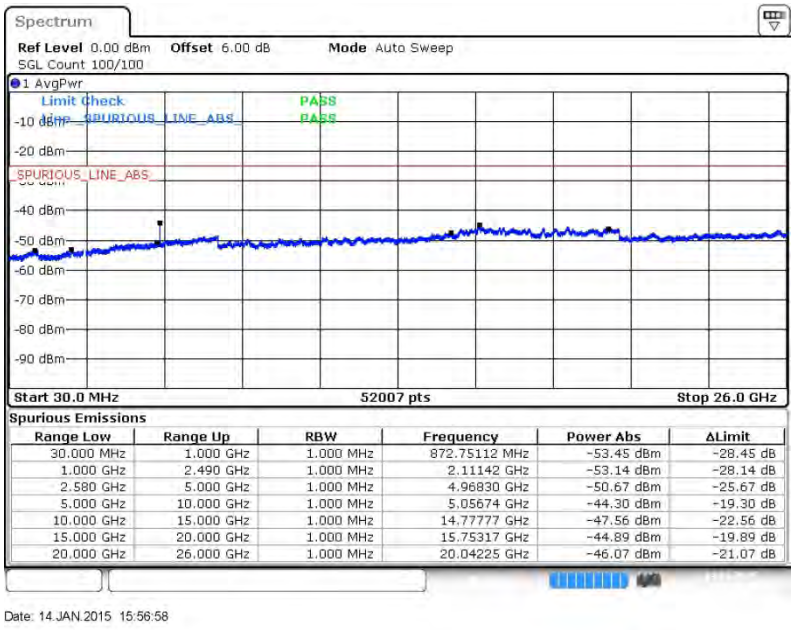
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	884.87006 MHz	-53.32 dBm	-28.32 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48777 GHz	-48.20 dBm	-23.20 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.98524 GHz	-50.69 dBm	-25.69 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.97805 GHz	-48.41 dBm	-23.41 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.68328 GHz	-47.54 dBm	-22.54 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.75467 GHz	-44.76 dBm	-19.76 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.17674 GHz	-45.95 dBm	-20.95 dB

Date: 14.JAN.2015 15:55:19

Band :	LTE Band 7	Channel :	CH21100 (Middle)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 74)

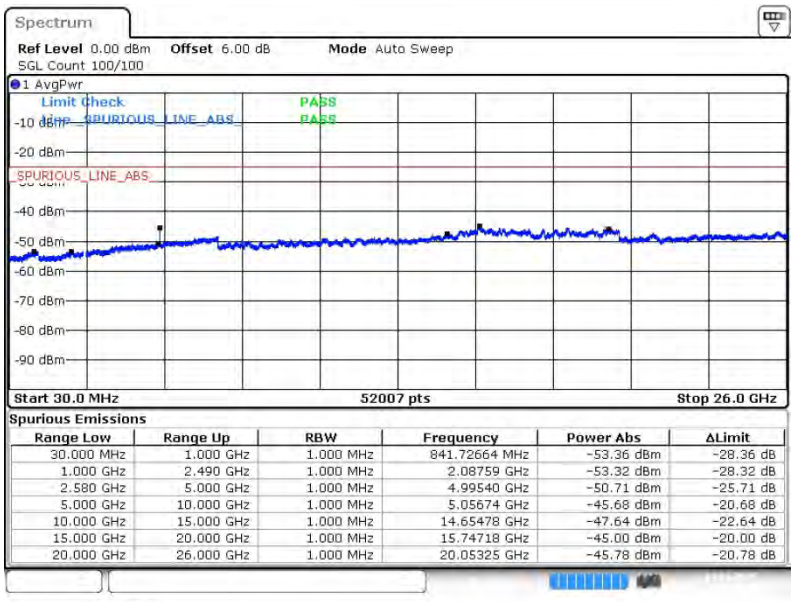


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	872.75112 MHz	-53.45 dBm	-28.45 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.11142 GHz	-53.14 dBm	-28.14 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.96830 GHz	-50.67 dBm	-25.67 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.05674 GHz	-44.30 dBm	-19.30 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.77777 GHz	-47.56 dBm	-22.56 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.75317 GHz	-44.89 dBm	-19.89 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.04225 GHz	-46.07 dBm	-21.07 dB

Date: 14.JAN.2015 15:56:58

16QAM (RB Size 36, RB Offset 18)



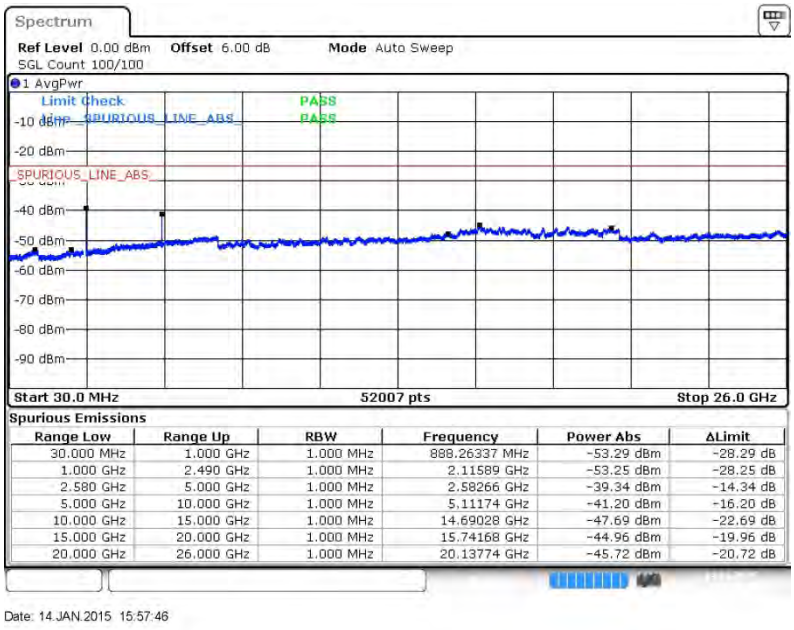
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	841.72664 MHz	-53.36 dBm	-28.36 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.08759 GHz	-53.32 dBm	-28.32 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.99540 GHz	-50.71 dBm	-25.71 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.05674 GHz	-45.68 dBm	-20.68 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.65478 GHz	-47.64 dBm	-22.64 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.74718 GHz	-45.00 dBm	-20.00 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.05325 GHz	-45.78 dBm	-20.78 dB

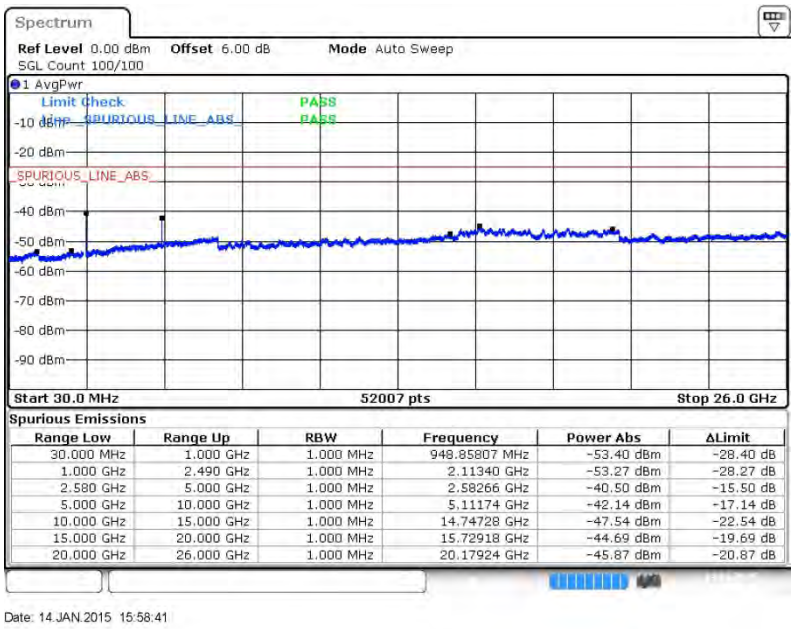
Date: 14.JAN.2015 15:56:08

Band :	LTE Band 7	Channel :	CH21375 (High)
Band Width :	15MHz		

QPSK (RB Size 1, RB Offset 0)

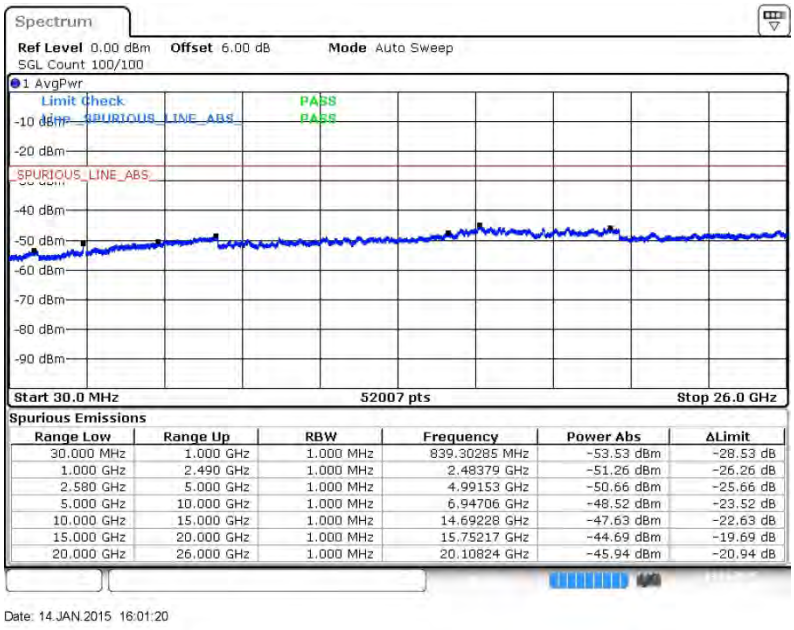


16QAM (RB Size 36, RB Offset 0)



Band :	LTE Band 7	Channel :	CH20850 (Low)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)

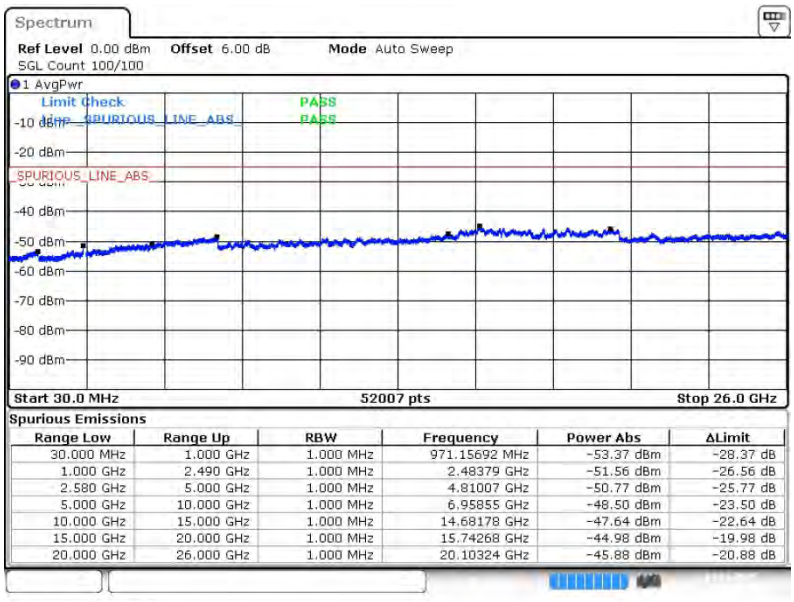


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	839.30285 MHz	-53.53 dBm	-28.53 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48379 GHz	-51.26 dBm	-26.26 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.99153 GHz	-50.66 dBm	-25.66 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.94706 GHz	-48.52 dBm	-23.52 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.69228 GHz	-47.63 dBm	-22.63 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.75217 GHz	-44.69 dBm	-19.69 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.10824 GHz	-45.94 dBm	-20.94 dB

Date: 14.JAN.2015 16:01:20

16QAM (RB Size 1, RB Offset 0)



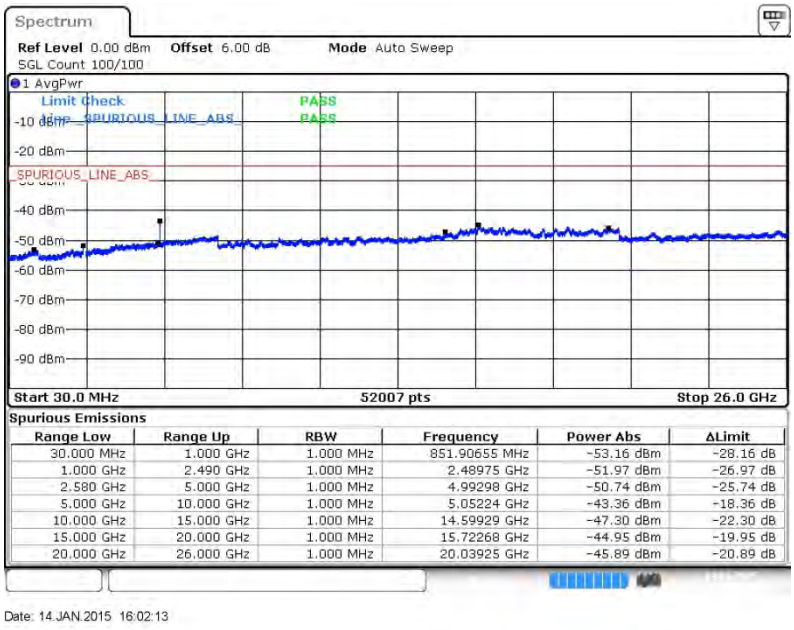
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	971.15692 MHz	-53.37 dBm	-28.37 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48379 GHz	-51.56 dBm	-26.56 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.81007 GHz	-50.77 dBm	-25.77 dB
5.000 GHz	10.000 GHz	1.000 MHz	6.95855 GHz	-48.50 dBm	-23.50 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.68178 GHz	-47.64 dBm	-22.64 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.74268 GHz	-44.98 dBm	-19.98 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.10324 GHz	-45.88 dBm	-20.88 dB

Date: 14.JAN.2015 16:00:13

Band :	LTE Band 7	Channel :	CH21100 (Middle)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)

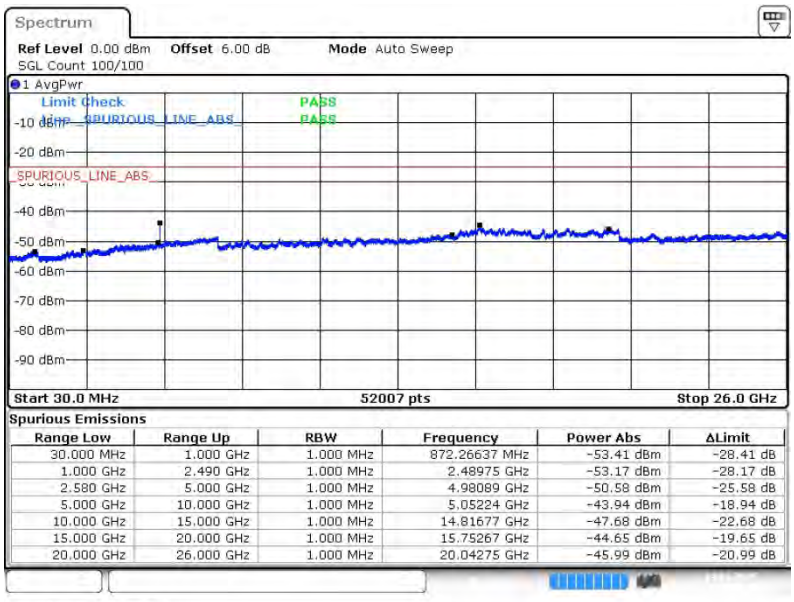


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	851.90655 MHz	-53.16 dBm	-28.16 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48975 GHz	-51.97 dBm	-26.97 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.99298 GHz	-50.74 dBm	-25.74 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.05224 GHz	-43.36 dBm	-18.36 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.59929 GHz	-47.30 dBm	-22.30 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.72268 GHz	-44.95 dBm	-19.95 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.03925 GHz	-45.89 dBm	-20.89 dB

Date: 14.JAN.2015 16:02:13

16QAM (RB Size 1, RB Offset 0)



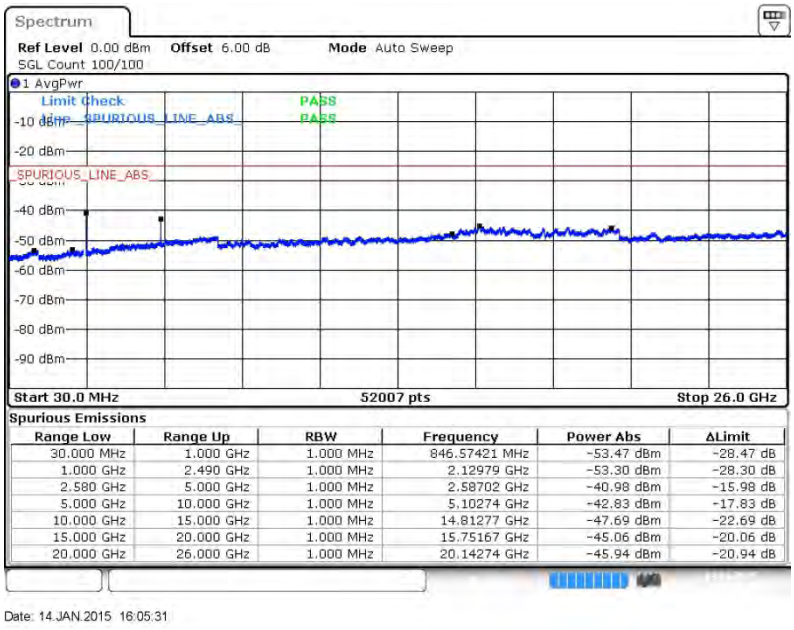
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	872.26637 MHz	-53.41 dBm	-28.41 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.48975 GHz	-53.17 dBm	-28.17 dB
2.580 GHz	5.000 GHz	1.000 MHz	4.98089 GHz	-50.58 dBm	-25.58 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.05224 GHz	-43.94 dBm	-18.94 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.81677 GHz	-47.68 dBm	-22.68 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.75267 GHz	-44.65 dBm	-19.65 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.04275 GHz	-45.99 dBm	-20.99 dB

Date: 14.JAN.2015 16:03:37

Band :	LTE Band 7	Channel :	CH21350 (High)
Band Width :	20MHz		

QPSK (RB Size 1, RB Offset 0)

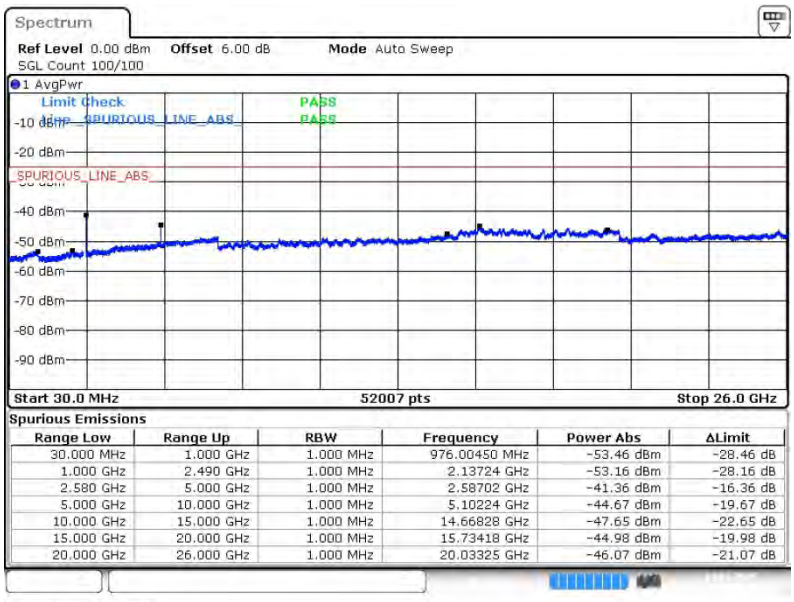


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	846.57421 MHz	-53.47 dBm	-28.47 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.12979 GHz	-53.30 dBm	-28.30 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.58702 GHz	-40.98 dBm	-15.98 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.10274 GHz	-42.83 dBm	-17.83 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.81277 GHz	-47.69 dBm	-22.69 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.75167 GHz	-45.06 dBm	-20.06 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.14274 GHz	-45.94 dBm	-20.94 dB

Date: 14.JAN.2015 16:05:31

16QAM (RB Size 1, RB Offset 0)



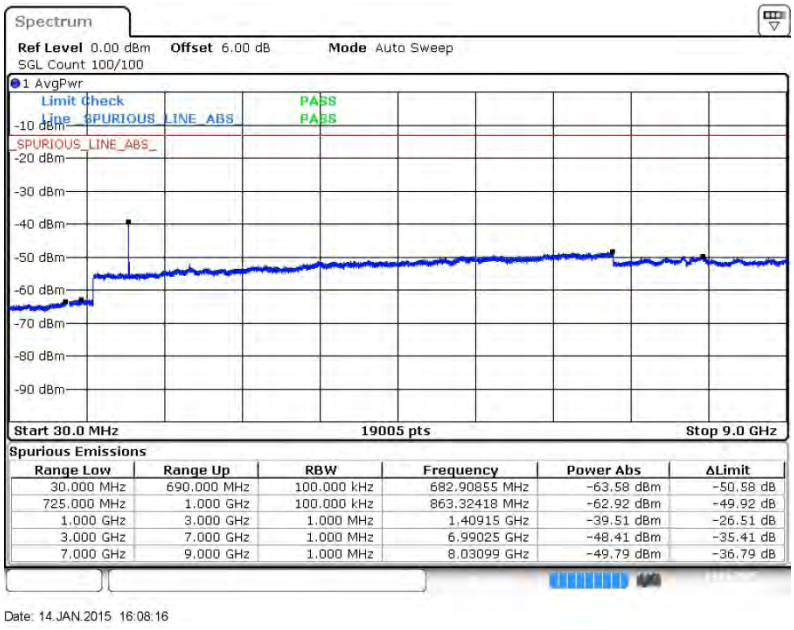
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	976.00450 MHz	-53.46 dBm	-28.46 dB
1.000 GHz	2.490 GHz	1.000 MHz	2.13724 GHz	-53.16 dBm	-28.16 dB
2.580 GHz	5.000 GHz	1.000 MHz	2.58702 GHz	-41.36 dBm	-16.36 dB
5.000 GHz	10.000 GHz	1.000 MHz	5.10224 GHz	-44.67 dBm	-19.67 dB
10.000 GHz	15.000 GHz	1.000 MHz	14.66828 GHz	-47.65 dBm	-22.65 dB
15.000 GHz	20.000 GHz	1.000 MHz	15.73418 GHz	-44.98 dBm	-19.98 dB
20.000 GHz	26.000 GHz	1.000 MHz	20.03325 GHz	-46.07 dBm	-21.07 dB

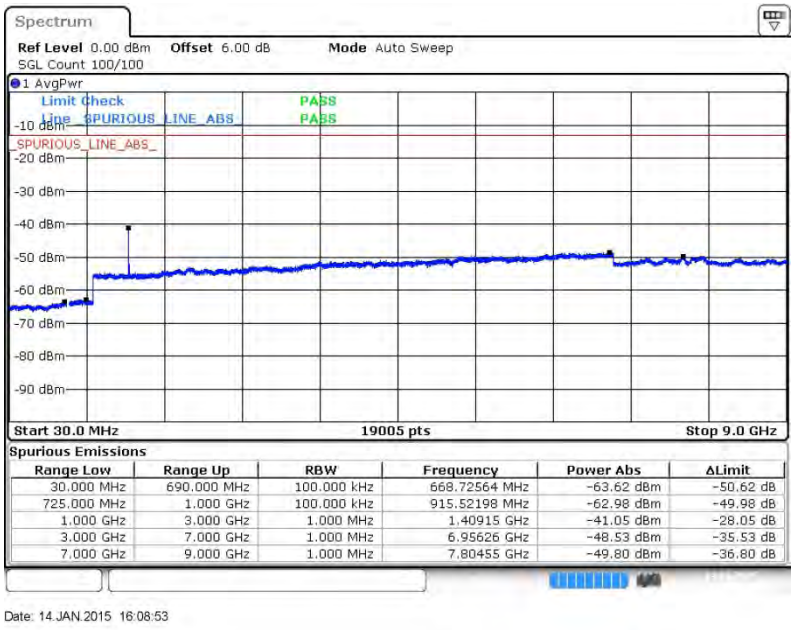
Date: 14.JAN.2015 16:04:42

Band :	LTE Band 17	Channel :	CH23755 (Low)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 0)

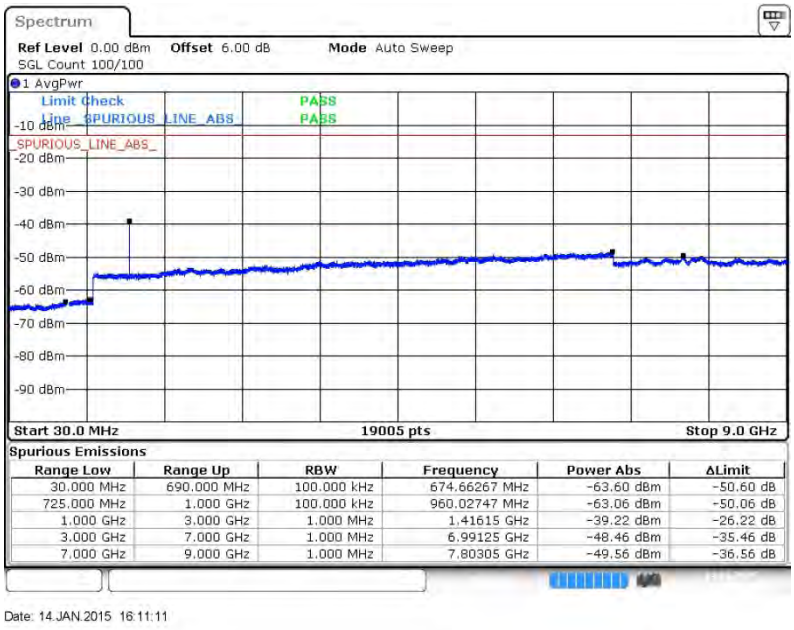


16QAM (RB Size 1, RB Offset 0)



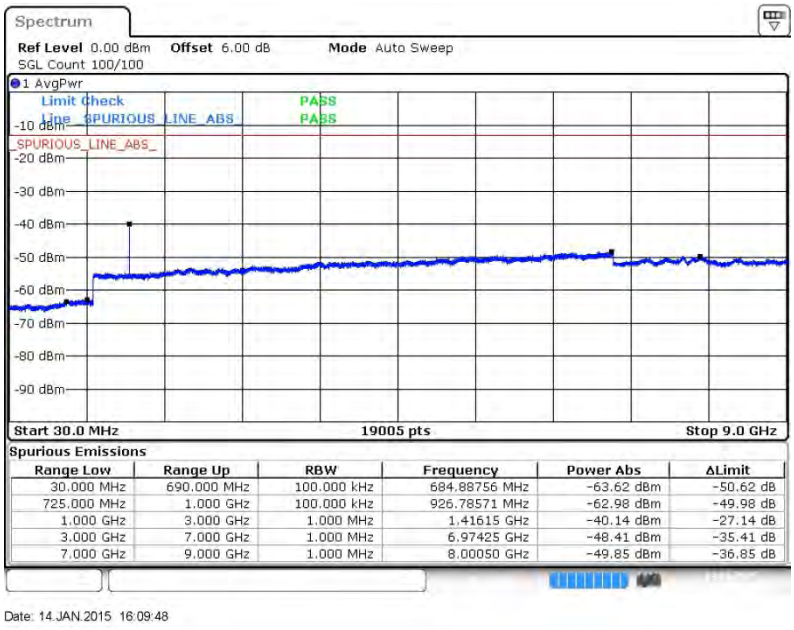
Band :	LTE Band 17	Channel :	CH23790 (Middle)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 24)



Date: 14.JAN.2015 16:11:11

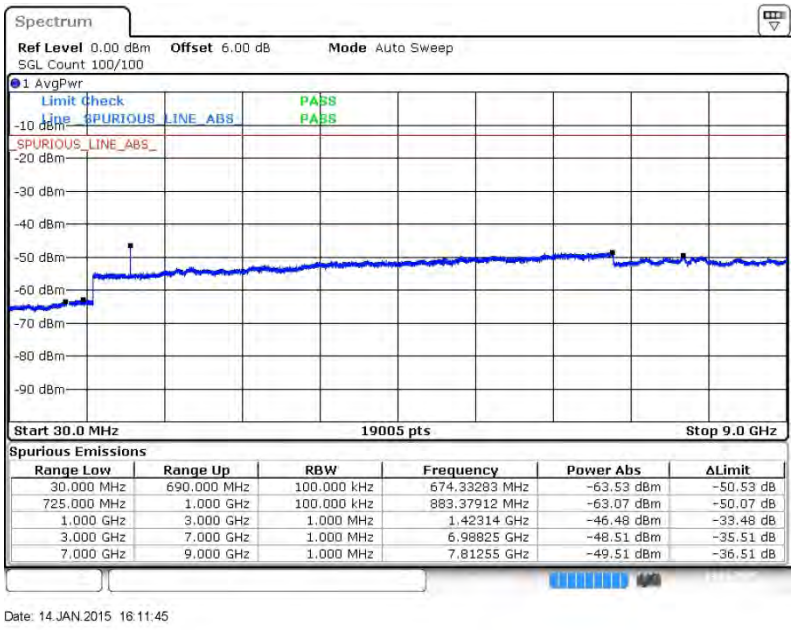
16QAM (RB Size 1, RB Offset 12)



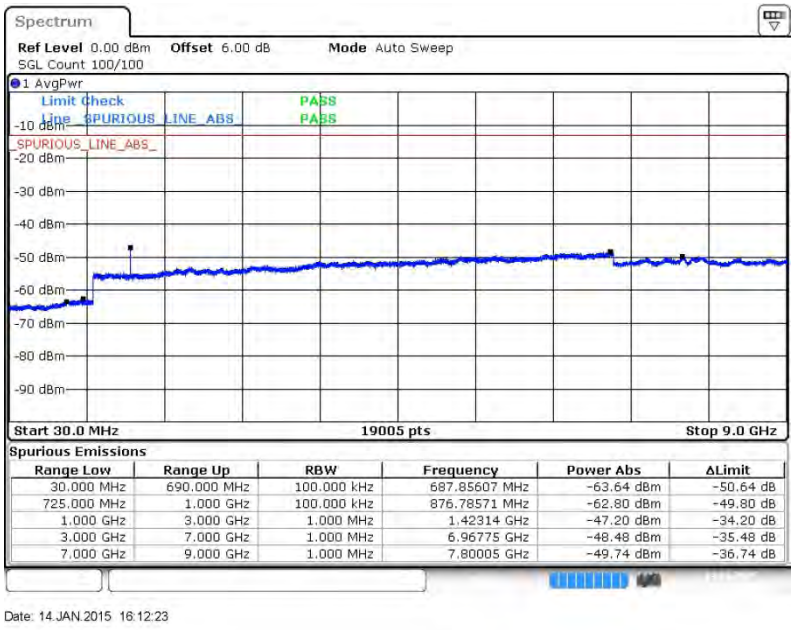
Date: 14.JAN.2015 16:09:48

Band :	LTE Band 17	Channel :	CH23825 (High)
Band Width :	5MHz		

QPSK (RB Size 1, RB Offset 24)

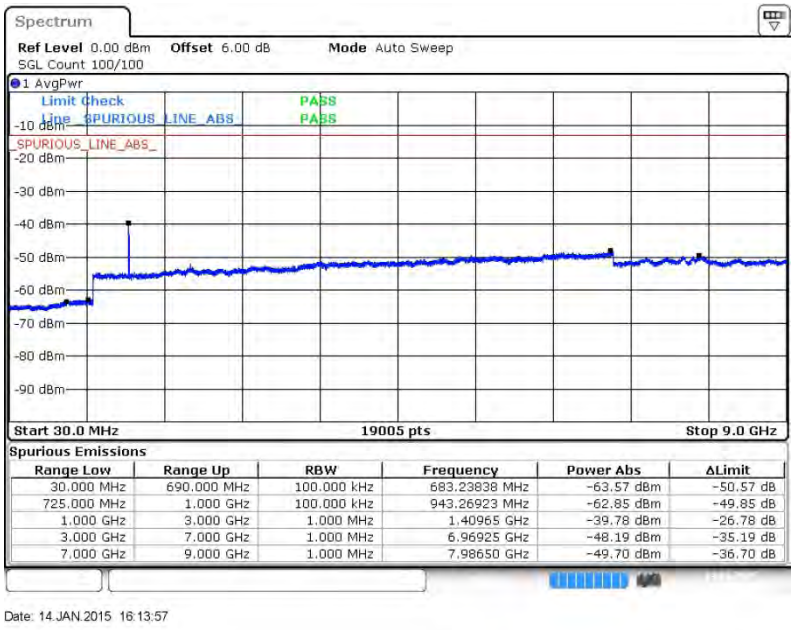


16QAM (RB Size 1, RB Offset 12)



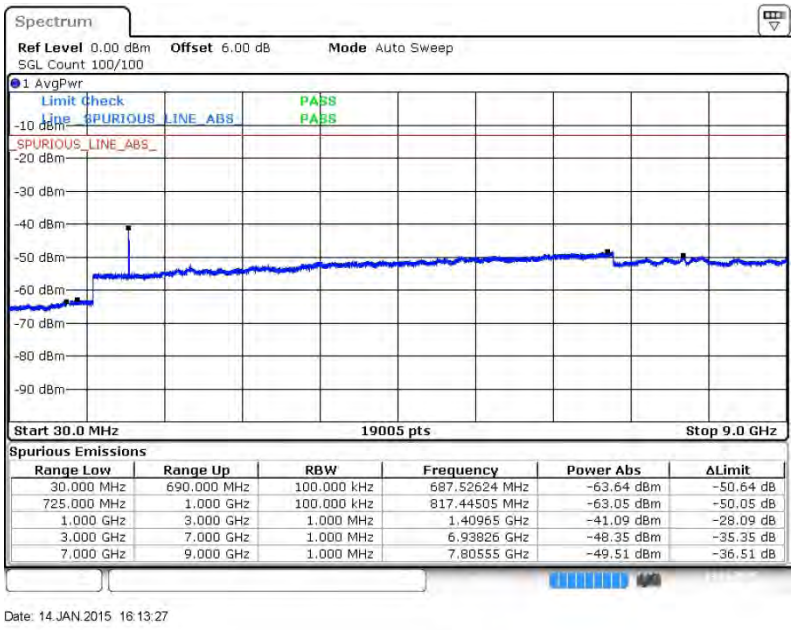
Band :	LTE Band 17	Channel :	CH23780 (Low)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.JAN.2015 16:13:57

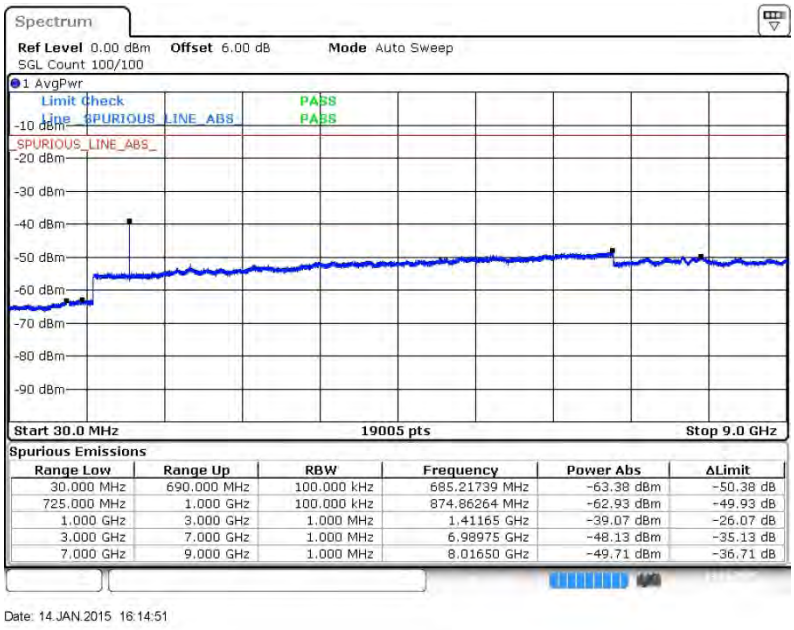
16QAM (RB Size 1, RB Offset 24)



Date: 14.JAN.2015 16:13:27

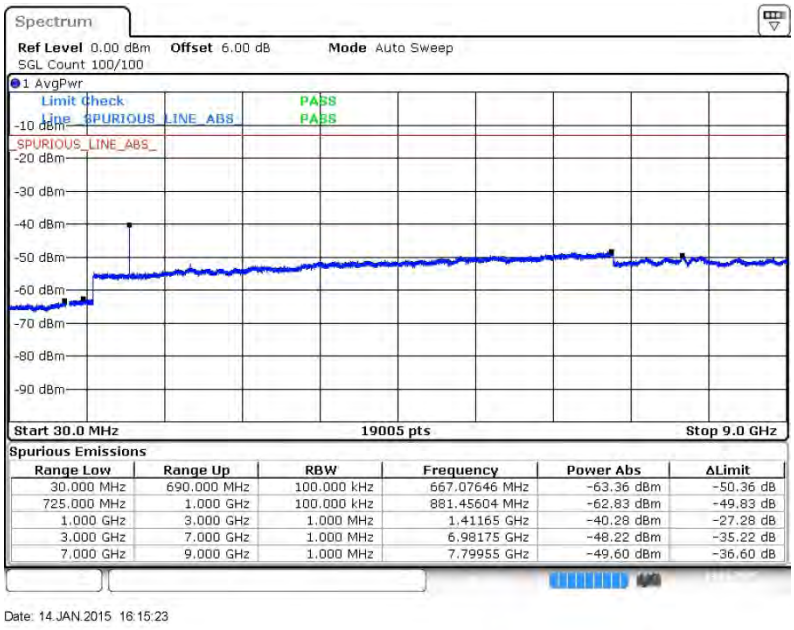
Band :	LTE Band 17	Channel :	CH23790 (Middle)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.JAN.2015 16:14:51

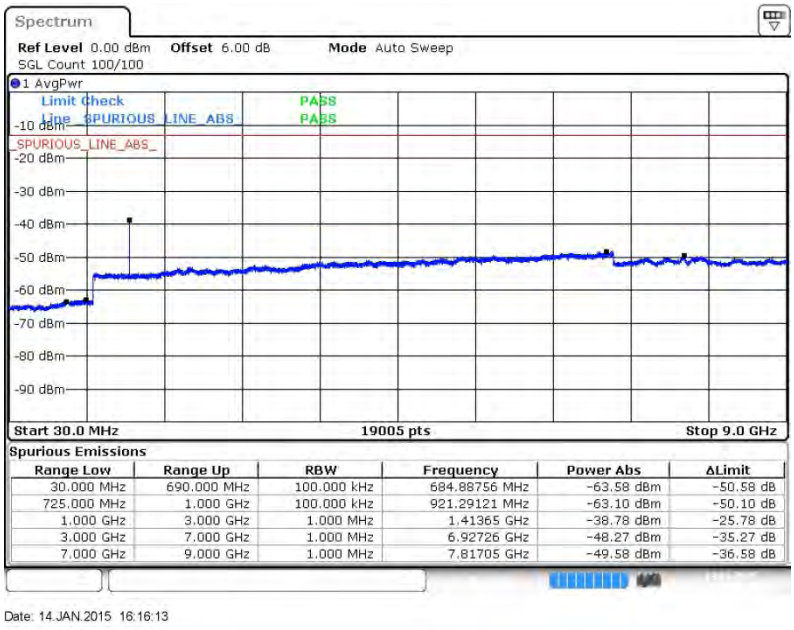
16QAM (RB Size 1, RB Offset 49)



Date: 14.JAN.2015 16:15:23

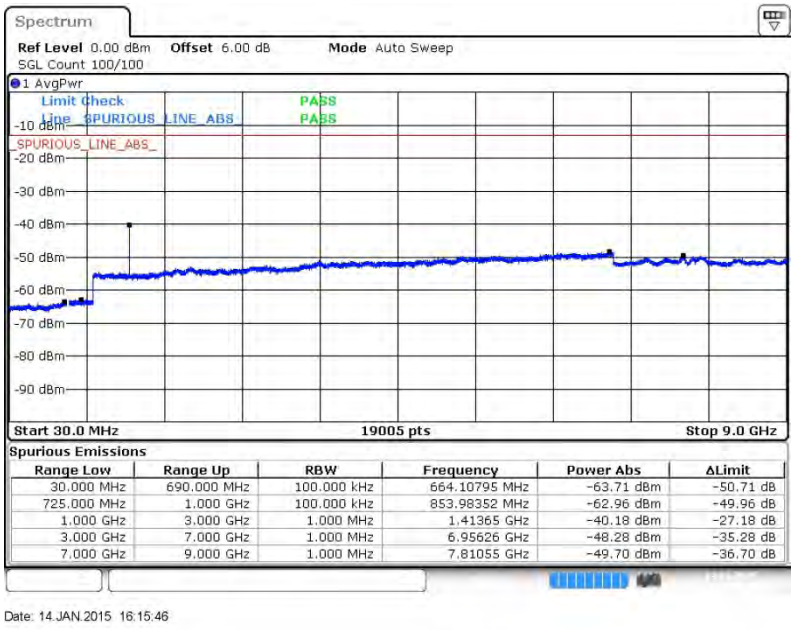
Band :	LTE Band 17	Channel :	CH23800 (High)
Band Width :	10MHz		

QPSK (RB Size 1, RB Offset 0)



Date: 14.JAN.2015 16:16:13

16QAM (RB Size 1, RB Offset 24)



Date: 14.JAN.2015 16:15:46

3.7 Radiated Spurious Emission Measurement

3.7.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

For Band 7
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 55 + 10 log (P) dB.

For LTE Band 17
For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.7.2 Measuring Instruments

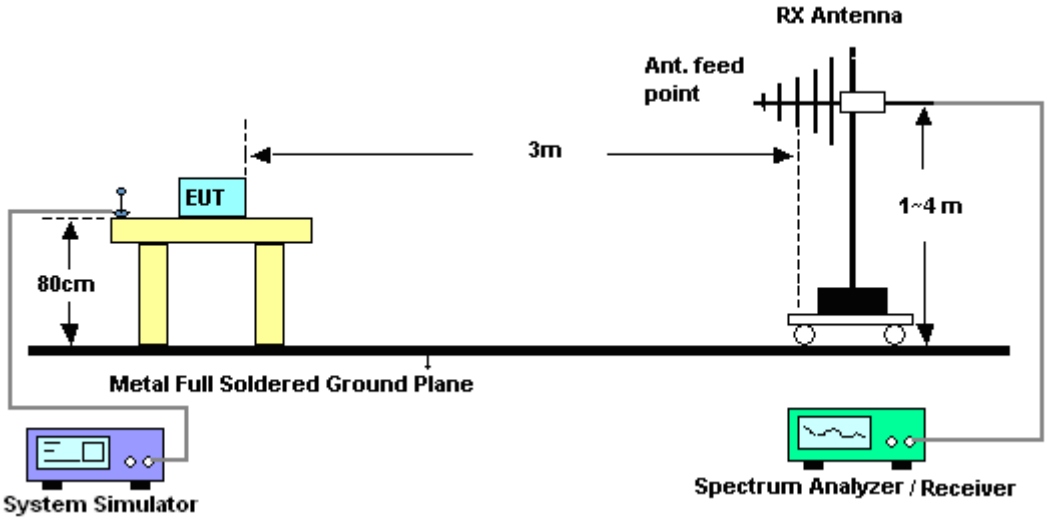
The measuring equipment is listed in the section 4 of this test report.

3.7.3 Test Procedures

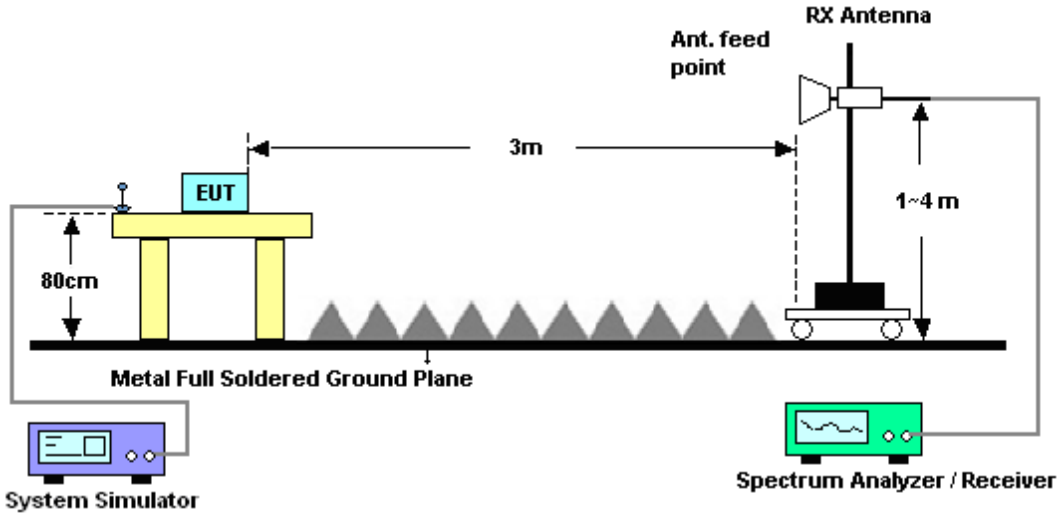
1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
    The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [43 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
    = -13dBm.
    For Band 7
    The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)
    = P(W)- [55 + 10log(P)] (dB)
    = [30 + 10log(P)] (dBm) - [55 + 10log(P)] (dB)
    = -25dBm.
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
12. ERP (dBm) = EIRP - 2.15

3.7.4 Test Setup

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.7.5 Test Result of Field Strength of Spurious Radiated

Band :	LTE Band 2	Temperature :	21~22°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3759	-48.71	-13	-35.71	-60.93	-52.29	3	6.58	H	Pass
5640	-29.88	-13	-16.88	-45.65	-35.25	3.84	9.21	H	Pass
7518	-49.52	-13	-36.52	-62.47	-56.19	4.43	11.10	H	Pass
9396	-53.32	-13	-40.32	-63.40	-61.01	4.92	12.62	H	Pass

Band :	LTE Band 2	Temperature :	21~22°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3759	-43.36	-13	-30.36	-57.52	-46.94	3	6.58	V	Pass
5640	-19.65	-13	-6.65	-36.54	-25.02	3.84	9.21	V	Pass
7518	-55.05	-13	-42.05	-62.21	-61.72	4.43	11.10	V	Pass
9396	-37.04	-13	-24.04	-56.89	-44.74	4.92	12.62	V	Pass

Band :	LTE Band 2	Temperature :	21~22°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-50.25	-13	-37.25	-61.56	-53.82	3	6.58	H	Pass
5637	-33.32	-13	-20.32	-48.49	-38.68	3.84	9.21	H	Pass
7515	-54.71	-13	-41.71	-62.57	-61.38	4.43	11.10	H	Pass
9393	-52.74	-13	-39.74	-62.82	-60.43	4.92	12.62	H	Pass
11277	-50.36	-13	-37.36	-64.96	-57.91	5.95	13.50	H	Pass
13155	-48.16	-13	-35.16	-65.69	-55.53	5.99	13.36	H	Pass

Band :	LTE Band 2	Temperature :	21~22°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-42.28	-13	-29.28	-56.98	-45.86	3	6.58	V	Pass
5637	-21.29	-13	-8.29	-38.14	-26.66	3.84	9.21	V	Pass
7515	-51.83	-13	-38.83	-60.54	-58.51	4.43	11.10	V	Pass
9393	-36.83	-13	-23.83	-56.77	-44.53	4.92	12.62	V	Pass
11277	-51.08	-13	-38.08	-64.97	-58.63	5.95	13.50	V	Pass
13152	-36.40	-13	-23.40	-60.62	-43.77	5.99	13.36	V	Pass

Band :	LTE Band 2	Temperature :	21~22°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-48.42	-13	-35.42	-60.72	-52.00	3	6.58	H	Pass
5634	-33.54	-13	-20.54	-48.65	-38.91	3.84	9.21	H	Pass
7509	-55.06	-13	-42.06	-62.92	-61.73	4.43	11.10	H	Pass
9387	-53.25	-13	-40.25	-63.33	-60.94	4.92	12.62	H	Pass

Band :	LTE Band 2	Temperature :	21~22°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3756	-41.33	-13	-28.33	-56.4	-44.91	3	6.58	V	Pass
5634	-19.33	-13	-6.33	-36.19	-24.70	3.84	9.21	V	Pass
7509	-55.97	-13	-42.97	-63.13	-62.64	4.43	11.10	V	Pass
9387	-34.83	-13	-21.83	-55.71	-42.52	4.92	12.62	V	Pass

Band :	LTE Band 2	Temperature :	21~22°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3750	-50.63	-13	-37.63	-61.73	-54.21	3	6.58	H	Pass
5628	-35.80	-13	-22.80	-50.28	-41.16	3.84	9.21	H	Pass
7500	-54.45	-13	-41.45	-62.31	-61.12	4.43	11.10	H	Pass
9375	-54.27	-13	-41.27	-64.35	-61.96	4.92	12.62	H	Pass
11250	-48.76	-13	-35.76	-63.36	-56.31	5.95	13.50	H	Pass
13125	-48.53	-13	-35.53	-66.06	-55.90	5.99	13.36	H	Pass

Band :	LTE Band 2	Temperature :	21~22°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3750	-42.55	-13	-29.55	-57.14	-46.12	3	6.58	V	Pass
5628	-19.65	-13	-6.65	-36.54	-25.02	3.84	9.21	V	Pass
7500	-55.67	-13	-42.67	-62.83	-62.34	4.43	11.10	V	Pass
9378	-38.01	-13	-25.01	-57.51	-45.71	4.92	12.62	V	Pass
11250	-50.58	-13	-37.58	-64.47	-58.13	5.95	13.50	V	Pass
13128	-36.06	-13	-23.06	-60.39	-43.43	5.99	13.36	V	Pass

Band :	LTE Band 2	Temperature :	21~22°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3747	-48.32	-13	-35.32	-60.65	-51.90	3	6.58	H	Pass
5622	-34.74	-13	-21.74	-49.44	-40.11	3.84	9.21	H	Pass
7491	-54.76	-13	-41.76	-62.62	-61.43	4.43	11.10	H	Pass
9363	-53.75	-13	-40.75	-63.83	-61.44	4.92	12.62	H	Pass

Band :	LTE Band 2	Temperature :	21~22°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3747	-42.56	-13	-29.56	-57.15	-46.14	3	6.58	V	Pass
5622	-19.81	-13	-6.81	-36.72	-25.18	3.84	9.21	V	Pass
7491	-55.23	-13	-42.23	-62.39	-61.90	4.43	11.10	V	Pass
9366	-38.90	-13	-25.90	-58.06	-46.60	4.92	12.62	V	Pass

Band :	LTE Band 2	Temperature :	21~22°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3741	-49.71	-13	-36.71	-61.36	-53.29	3	6.58	H	Pass
5616	-34.30	-13	-21.30	-49.17	-39.67	3.84	9.21	H	Pass
7479	-55.91	-13	-42.91	-63.77	-62.58	4.43	11.10	H	Pass
9351	-53.33	-13	-40.33	-63.41	-61.02	4.92	12.62	H	Pass

Band :	LTE Band 2	Temperature :	21~22°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3741	-41.71	-13	-28.71	-56.63	-45.28	3	6.58	V	Pass
5616	-20.74	-13	-7.74	-37.63	-26.10	3.84	9.21	V	Pass
7479	-55.72	-13	-42.72	-62.88	-62.39	4.43	11.10	V	Pass
9354	-37.57	-13	-24.57	-57.23	-45.27	4.92	12.62	V	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3463.92	-53.54	-13	-40.54	-56.96	-61.57	1.17	9.20	H	Pass
5195.88	-30.52	-13	-17.52	-45.38	-39.68	1.34	10.50	H	Pass
6927.84	-53.10	-13	-40.10	-65.17	-61.23	1.67	9.80	H	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	1.4MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3463.92	-40.65	-13	-27.65	-47.97	-48.68	1.17	9.20	V	Pass
5195.88	-16.47	-13	-3.47	-34.58	-25.63	1.34	10.50	V	Pass
6927.84	-43.92	-13	-30.92	-57.93	-52.05	1.67	9.80	V	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3462.48	-53.61	-13	-40.61	-57.03	-61.64	1.17	9.20	H	Pass
5193.72	-32.79	-13	-19.79	-47.24	-41.95	1.34	10.50	H	Pass
6924.96	-54.54	-13	-41.54	-66.61	-62.67	1.67	9.80	H	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	3MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3462.48	-40.34	-13	-27.34	-47.66	-48.37	1.17	9.20	V	Pass
5193.72	-16.42	-13	-3.42	-34.55	-25.58	1.34	10.50	V	Pass
6924.96	-42.95	-13	-29.95	-56.96	-51.08	1.67	9.80	V	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3460.68	-53.12	-13	-40.12	-56.54	-61.15	1.17	9.20	H	Pass
5191.02	-32.44	-13	-19.44	-46.89	-41.60	1.34	10.50	H	Pass
6921.36	-54.41	-13	-41.41	-66.48	-62.54	1.67	9.80	H	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3460.68	-39.98	-13	-26.98	-47.32	-48.01	1.17	9.20	V	Pass
5191.02	-19.54	-13	-6.54	-37.22	-28.70	1.34	10.50	V	Pass
6921.36	-43.93	-13	-30.93	-57.94	-52.06	1.67	9.80	V	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3456.18	-52.01	-13	-39.01	-55.43	-60.04	1.17	9.20	H	Pass
5184.27	-32.21	-13	-19.21	-46.66	-41.37	1.34	10.50	H	Pass
6912.36	-54.42	-13	-41.42	-66.49	-62.55	1.67	9.80	H	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3456.18	-38.68	-13	-25.68	-46.51	-46.71	1.17	9.20	V	Pass
5184.27	-19.86	-13	-6.86	-37.47	-29.02	1.34	10.50	V	Pass
6912.36	-46.93	-13	-33.93	-60.94	-55.06	1.67	9.80	V	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3451.68	-52.37	-13	-39.37	-55.79	-60.40	1.17	9.20	H	Pass
5177.52	-35.54	-13	-22.54	-48.60	-44.70	1.34	10.50	H	Pass
6903.36	-54.53	-13	-41.53	-66.60	-62.66	1.67	9.80	H	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3451.68	-37.76	-13	-24.76	-45.88	-45.79	1.17	9.20	V	Pass
5177.52	-18.69	-13	-5.69	-36.55	-27.85	1.34	10.50	V	Pass
6903.36	-44.80	-13	-31.80	-58.81	-52.93	1.67	9.80	V	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3447.18	-51.54	-13	-38.54	-54.96	-59.57	1.17	9.20	H	Pass
5170.77	-35.07	-13	-22.07	-48.26	-44.23	1.34	10.50	H	Pass
6894.36	-54.25	-13	-41.25	-66.32	-62.38	1.67	9.80	H	Pass

Band :	LTE Band 4	Temperature :	23~25°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3447.18	-37.58	-13	-24.58	-45.78	-45.61	1.17	9.20	V	Pass
5170.77	-19.87	-13	-6.87	-37.48	-29.03	1.34	10.50	V	Pass
6894.36	-46.47	-13	-33.47	-60.48	-54.60	1.67	9.80	V	Pass

Band :	LTE Band 7	Temperature :	21~22°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5066	-33.33	-25	-8.33	-48.86	-38.32	3.49	8.48	H	Pass
7601	-49.62	-25	-24.62	-60.53	-56.48	4.28	11.15	H	Pass
10128	-47.88	-25	-22.88	-64.73	-55.72	5.1	12.94	H	Pass

Band :	LTE Band 7	Temperature :	21~22°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5066	-36.35	-25	-11.35	-51.49	-41.34	3.49	8.48	V	Pass
7598	-51.57	-25	-26.57	-62.14	-58.43	4.28	11.15	V	Pass
10128	-48.11	-25	-23.11	-64.74	-55.95	5.1	12.94	V	Pass

Band :	LTE Band 7	Temperature :	21~22°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5060	-34.98	-25	-9.98	-50.10	-39.97	3.49	8.48	H	Pass
7595	-48.20	-25	-23.20	-59.58	-55.06	4.28	11.15	H	Pass
10124	-43.87	-25	-18.87	-61.28	-51.71	5.1	12.94	H	Pass

Band :	LTE Band 7	Temperature :	21~22°C
Test Mode :	10MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5060	-36.07	-25	-11.07	-51.25	-41.06	3.49	8.48	V	Pass
7589	-51.21	-25	-26.21	-61.78	-58.07	4.28	11.15	V	Pass
10124	-41.41	-25	-16.41	-59.97	-49.25	5.1	12.94	V	Pass

Band :	LTE Band 7	Temperature :	21~22°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5054	-34.98	-25	-9.98	-50.10	-39.97	3.49	8.48	H	Pass
7586	-48.30	-25	-23.30	-59.66	-55.16	4.28	11.15	H	Pass
10112	-47.62	-25	-22.62	-64.47	-55.46	5.1	12.94	H	Pass

Band :	LTE Band 7	Temperature :	21~22°C
Test Mode :	15MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5054	-36.68	-25	-11.68	-51.77	-41.67	3.49	8.48	V	Pass
7583	-51.35	-25	-26.35	-61.92	-58.21	4.28	11.15	V	Pass
10112	-47.81	-25	-22.81	-64.44	-55.65	5.1	12.94	V	Pass

Band :	LTE Band 7	Temperature :	21~22°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5051	-35.44	-25	-10.44	-50.40	-40.43	3.49	8.48	H	Pass
7580	-48.78	-25	-23.78	-60.05	-55.65	4.28	11.15	H	Pass
10100	-47.16	-25	-22.16	-64.01	-55.00	5.1	12.94	H	Pass

Band :	LTE Band 7	Temperature :	21~22°C
Test Mode :	20MHz QPSK RB Size 1 Offset 0	Relative Humidity :	41~42%
Test Engineer :	Jack Wang	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
5051	-36.50	-25	-11.50	-51.62	-41.49	3.49	8.48	V	Pass
7574	-52.71	-25	-27.71	-63.28	-59.57	4.28	11.15	V	Pass
10100	-48.69	-25	-23.69	-65.32	-56.53	5.1	12.94	V	Pass

Band :	LTE Band 17	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1415.68	-34.37	-13	-21.37	-51.14	-37.30	0.78	5.86	H	Pass
2123.58	-39.93	-13	-26.93	-55.19	-42.53	1	5.75	H	Pass
2831.36	-49.53	-13	-36.53	-59.89	-53.83	1.05	7.50	H	Pass
3539.22	-47.37	-13	-34.37	-62.00	-52.02	1.21	8.01	H	Pass
4247.06	-48.85	-13	-35.85	-66.94	-54.18	1.35	8.83	H	Pass
4954.9	-49.77	-13	-36.77	-67.67	-55.79	1.48	9.65	H	Pass

Band :	LTE Band 17	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1415.68	-32.57	-13	-19.57	-46.51	-35.50	0.78	5.86	V	Pass
2123.58	-32.57	-13	-19.57	-45.68	-35.17	1.00	5.75	V	Pass
2831.36	-37.76	-13	-24.76	-51.73	-42.06	1.05	7.50	V	Pass
3539.22	-35.23	-13	-22.23	-52.03	-39.88	1.21	8.01	V	Pass
4247.06	-41.31	-13	-28.31	-59.54	-46.64	1.35	8.83	V	Pass
4954.9	-46.46	-13	-33.46	-64.04	-52.48	1.48	9.65	V	Pass

Band :	LTE Band 17	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Horizontal
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1411.18	-34.85	-13	-21.85	-51.58	-37.78	0.78	5.86	H	Pass
2116.77	-40.06	-13	-27.06	-55.31	-42.66	1	5.75	H	Pass
2822.36	-50.40	-13	-37.40	-60.76	-54.70	1.05	7.50	H	Pass
3527.95	-47.75	-13	-34.75	-62.38	-52.40	1.21	8.01	H	Pass
4233.54	-48.23	-13	-35.23	-66.32	-53.56	1.35	8.83	H	Pass
4939.13	-49.50	-13	-36.50	-67.40	-55.52	1.48	9.65	H	Pass

Band :	LTE Band 17	Temperature :	23~25°C
Test Mode :	5MHz QPSK RB Size 1 Offset 0	Relative Humidity :	48~52%
Test Engineer :	Leo Liao	Polarization :	Vertical
Remark :	Spurious emissions below 1GHz were found more than 20dB below limit line.		

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1411.18	-32.65	-13	-19.65	-46.57	-35.58	0.78	5.86	V	Pass
2116.77	-33.16	-13	-20.16	-46.24	-35.76	1.00	5.75	V	Pass
2822.36	-39.34	-13	-26.34	-53.12	-43.64	1.05	7.50	V	Pass
3527.95	-35.92	-13	-22.92	-52.98	-40.57	1.21	8.01	V	Pass
4233.54	-47.05	-13	-34.05	-64.30	-52.38	1.35	8.83	V	Pass
4939.13	-44.04	-13	-31.04	-61.62	-50.06	1.48	9.65	V	Pass

3.8 Frequency Stability Measurement

3.8.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

3.8.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

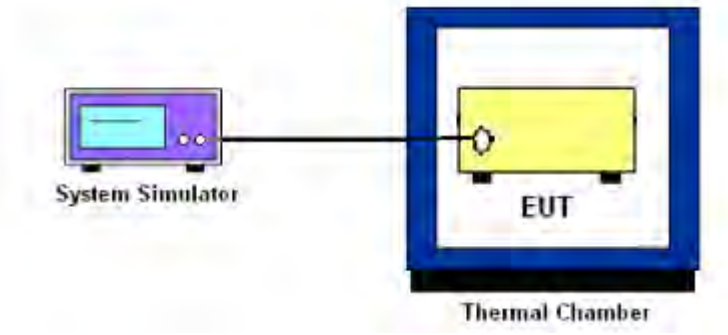
3.8.3 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.8.4 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

3.8.5 Test Setup



3.8.6 Test Result of Temperature Variation (FCC)

Band :	LTE Band 2 (QPSK)	Limit (ppm) :	within authorized band

Temperature (°C)	BW 10MHz	Result
	Deviation (ppm)	
50	0.0053	PASS
40	0.0009	
30	0.0009	
20(Ref.)	0.0000	
10	0.0007	
0	0.0010	
-10	0.0012	
-20	0.0020	
-30	0.0001	

Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

Band :	LTE Band 4 (QPSK)	Limit (ppm) :	within authorized band

Temperature (°C)	BW 10MHz	Result
	Deviation (ppm)	
50	0.0009	PASS
40	0.0002	
30	0.0075	
20(Ref.)	0.0000	
10	0.0103	
0	0.0012	
-10	0.0100	
-20	0.0013	
-30	0.0023	

Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

Band :	LTE Band 7 (QPSK)	Limit (ppm) :	within authorized band

Temperature (°C)	BW 10MHz	Result
	Deviation (ppm)	
50	0.0372	PASS
40	0.0064	
30	0.0047	
20(Ref.)	0.0000	
10	0.0007	
0	0.0011	
-10	0.0058	
-20	0.0056	
-30	0.0001	

Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

Band :	LTE Band 17 (QPSK)	Limit (ppm) :	within authorized band

Temperature (°C)	BW 10MHz	Result
	Deviation (ppm)	
50	0.0025	PASS
40	0.0034	
30	0.0024	
20(Ref.)	0.0000	
10	0.0038	
0	0.0046	
-10	0.0023	
-20	0.0013	
-30	0.0039	

Note: The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

3.8.7 Test Result of Voltage Variation (FCC)

Band	Bandwidth	Voltage (Volt)	Deviation (ppm)	Limit (ppm)	Result
LTE Band 2	10M	4.35	0.0009	(Note 3.)	PASS
		Normal	0.0010		
		3.60	0.0004		
LTE Band 4	10M	4.35	0.0086	(Note 3.)	PASS
		Normal	0.0114		
		3.60	0.0012		
LTE Band 7	10M	4.35	0.0007	(Note 3.)	PASS
		Normal	0.0005		
		3.60	0.0062		
LTE Band 17	10M	4.35	0.0056	(Note 3.)	PASS
		Normal	0.0014		
		3.60	0.0042		

Remark:

1. Normal Voltage = 3.80V.
2. The manufacturer declared that the EUT could work properly between voltage 3.60V ~ 4.35V.
3. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV30	101338	9kHz~30GHz	May 04, 2014	Dec. 12, 2014~ Jan. 14, 2015	May 03, 2015	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Oct. 25, 2014	Dec. 12, 2014~ Jan. 14, 2015	Oct. 24, 2015	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Oct. 25, 2014	Jan. 15, 2015~ Jan. 16, 2015	Oct. 24, 2015	Radiation (03CH01-KS)
Spectrum Analyzer	R&S	FSP30	101399	9kHz~30GHz	May 04, 2014	Jan. 15, 2015~ Jan. 16, 2015	May 03, 2015	Radiation (03CH01-KS)
Bilog Antenna	TeseQ	CBL6112D	37879	30Mhz-2Ghz	Sep. 13, 2014	Jan. 15, 2015~ Jan. 16, 2015	Sep. 12, 2015	Radiation (03CH01-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Nov. 08, 2014	Jan. 15, 2015~ Jan. 16, 2015	Nov. 07, 2015	Radiation (03CH01-KS)
Active Horn Antenna	com-power	AHA-118	701030	1GHz~18GHz	Nov. 08, 2014	Jan. 15, 2015~ Jan. 16, 2015	Nov. 07, 2015	Radiation (03CH01-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz~40GHz	Mar. 10, 2014	Jan. 15, 2015~ Jan. 16, 2015	Mar. 09, 2015	Radiation (03CH01-KS)
Amplifier	com-power	PA-103A	161073	1MHz~1GHz	May 04, 2014	Jan. 15, 2015~ Jan. 16, 2015	May 03, 2015	Radiation (03CH01-KS)
Amplifier	Agilent	8449B	3008A02371	1GHz~26.5GHz	Oct. 28, 2014	Jan. 15, 2015~ Jan. 16, 2015	Oct. 27, 2015	Radiation (03CH01-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jan. 15, 2015~ Jan. 16, 2015	NCR	Radiation (03CH01-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Jan. 15, 2015~ Jan. 16, 2015	NCR	Radiation (03CH01-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Jan. 15, 2015~ Jan. 16, 2015	NCR	Radiation (03CH01-KS)
ESCIO TEST Receiver	R&S	ESCI	100724	9kHz~3GHz	Feb. 21, 2014	Jan. 15, 2015	Feb. 20, 2015	Radiation (03CH01-SZ)
Spectrum Analyzer	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2014	Jan. 15, 2015	May 25, 2015	Radiation (03CH01-SZ)
Bilog Antenna	TESEQ	CBL 6112D	37877	30MHz~2GHz	Oct. 15, 2014	Jan. 15, 2015	Oct. 14, 2015	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 15, 2014	Jan. 15, 2015	Oct. 14, 2015	Radiation (03CH01-SZ)
Double Ridged Horn Antenna	COM-POWER	AH-840	101073	18GHz~40GHz	Jun. 09, 2014	Jan. 15, 2015	Jun. 08, 2015	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz	Feb. 21, 2014	Jan. 15, 2015	Feb. 20, 2015	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	May 08, 2014	Jan. 15, 2015	May 07, 2015	Radiation (03CH01-SZ)
AC Source(AVR)	Chroma	61601	616010001985	100Vac~250Vac	Mar. 25, 2014	Jan. 15, 2015	Mar. 24, 2015	Radiation (03CH01-SZ)
Turn Table	EM Electronics	EM 1000	N/A	0~360 degree	NCR	Jan. 15, 2015	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM Electronics	EM 1000	N/A	1 m~4 m	NCR	Jan. 15, 2015	NCR	Radiation (03CH01-SZ)

Spectrum Analyzer	R&S	FSP 7	100818	9kHz~7GHz	Jul. 17, 2014	Jan. 10, 2015	Jul. 16, 2015	ERP/EIRP (OTA02-SZ)
Quad-Ridged Horn	ETS-Lindgren	3164-08	00102954	700MHz~10000MHz	N/A	Jan. 10, 2015	N/A	ERP/EIRP (OTA02-SZ)
Multi-Devices Controller	ETS-Lindgren	2090-OPT1	00108147	N/A	N/A	Jan. 10, 2015	N/A	ERP/EIRP (OTA02-SZ)
Switch Control Mainframe	Agilent	3499A	MY42005451	N/A	N/A	Jan. 10, 2015	N/A	ERP/EIRP (OTA02-SZ)

5 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz) for 03CH01-KS

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.5dB**

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz) for 03CH01-SZ

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.9dB**