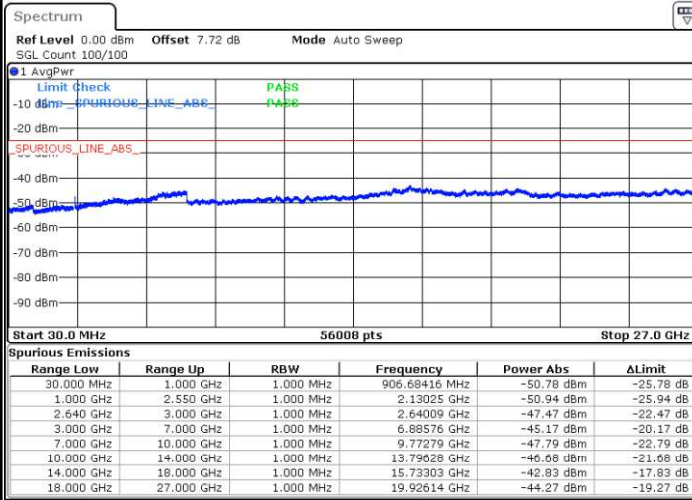




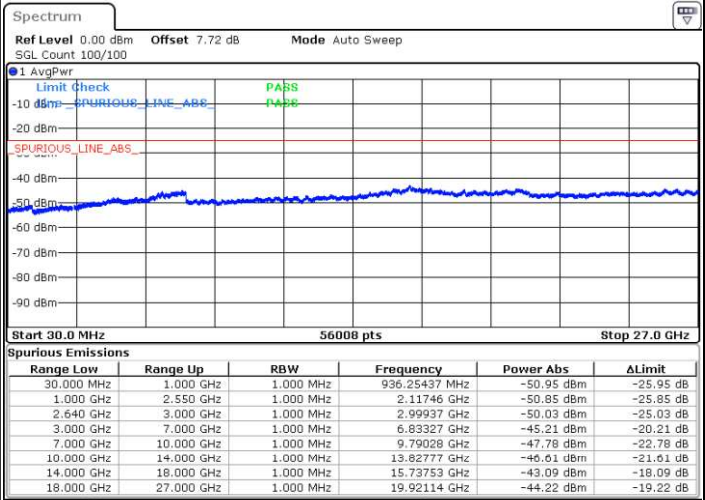
LTE Band 38 / 5MHz

Highest Channel / QPSK



Date: 18 MAY 2019 04:00:41

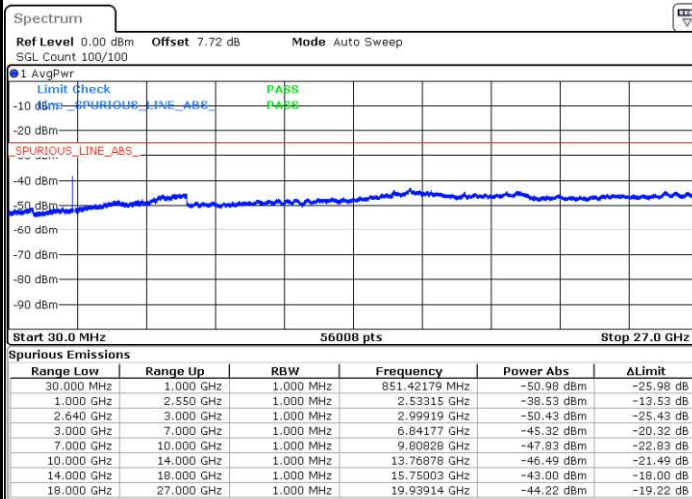
Highest Channel / 16QAM



Date: 18 MAY 2019 04:01:32

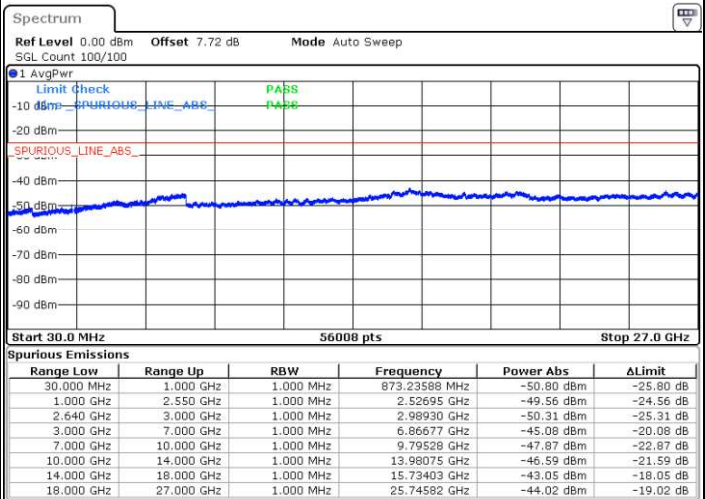
LTE Band 38 / 10MHz

Lowest Channel / QPSK



Date: 18 MAY 2019 04:20:33

Lowest Channel / 16QAM

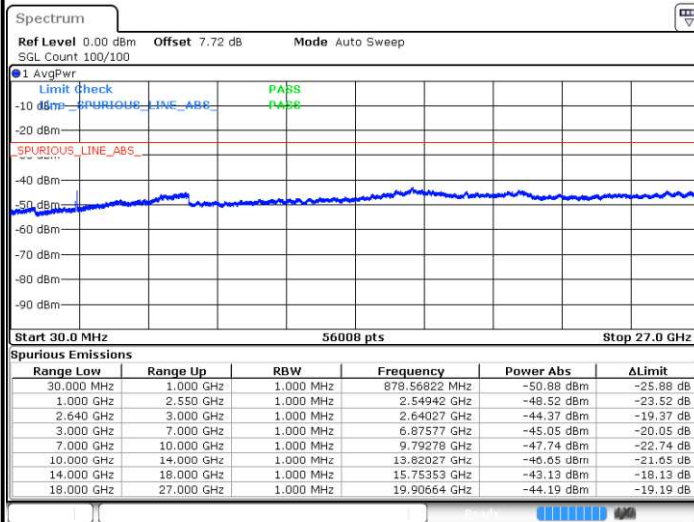


Date: 18 MAY 2019 04:21:23



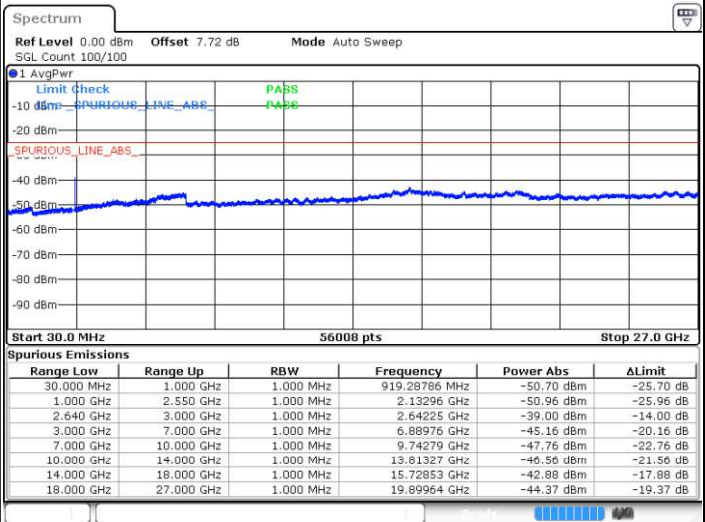
LTE Band 38 / 10MHz

Middle Channel / QPSK



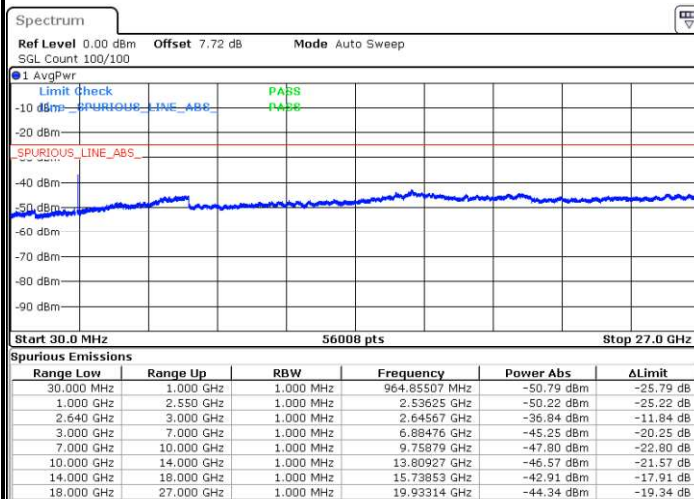
Date: 18 MAY 2019 04:23:16

Middle Channel / 16QAM



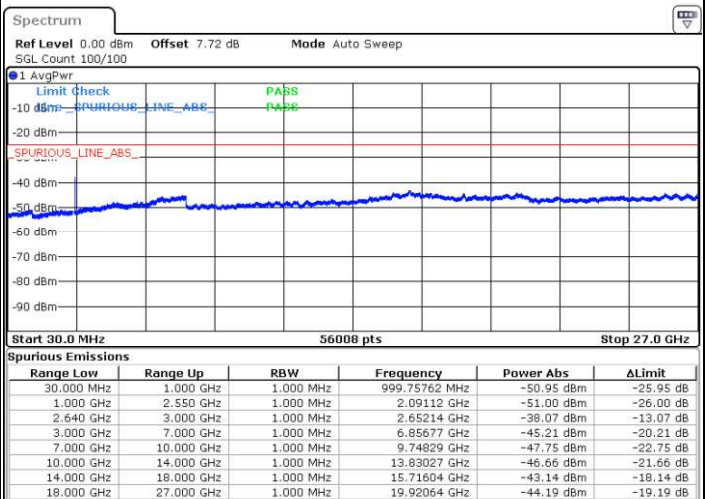
Date: 18 MAY 2019 04:24:04

Highest Channel / QPSK



Date: 18 MAY 2019 04:26:00

Highest Channel / 16QAM

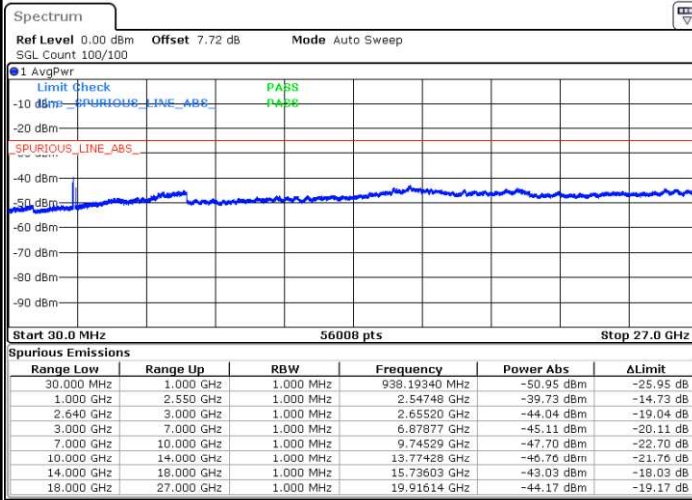


Date: 18 MAY 2019 04:26:49



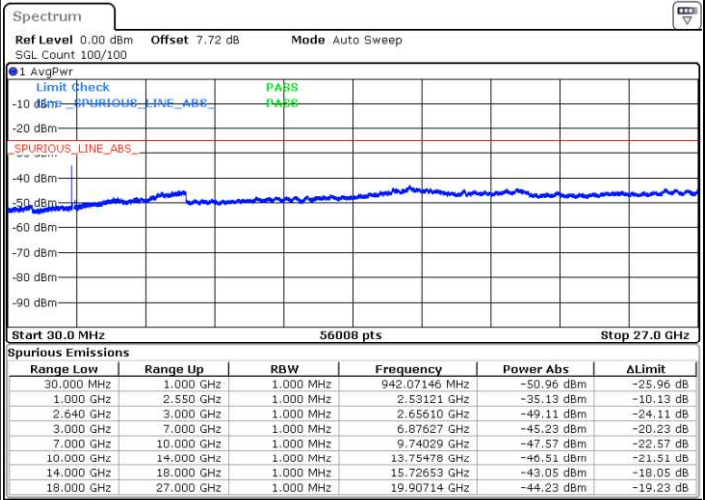
LTE Band 38 / 15MHz

Lowest Channel / QPSK



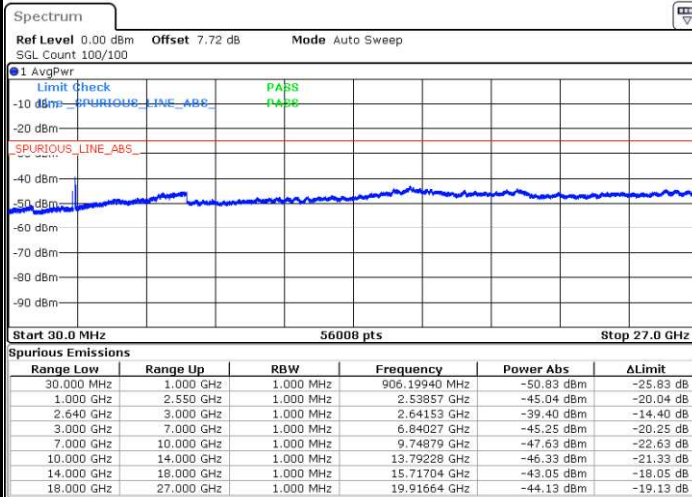
Date: 18 MAY 2019 04:42:28

Lowest Channel / 16QAM



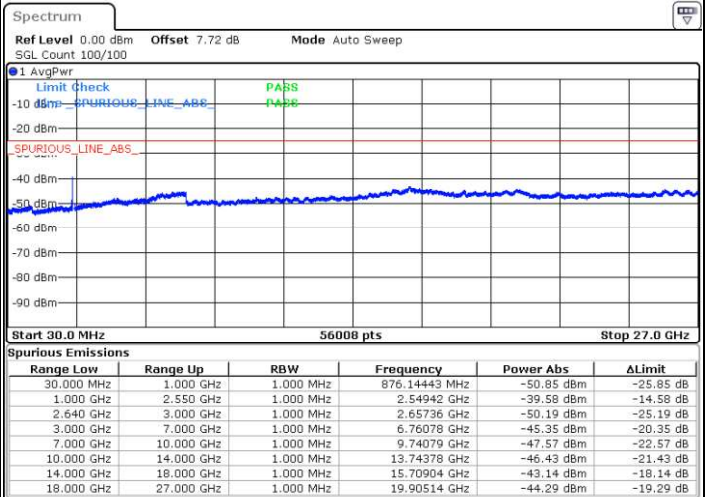
Date: 18 MAY 2019 04:43:20

Middle Channel / QPSK



Date: 18 MAY 2019 04:45:03

Middle Channel / 16QAM

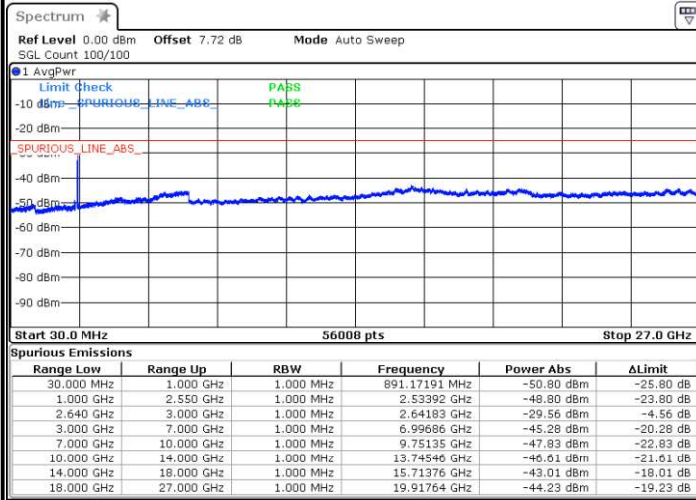


Date: 18 MAY 2019 04:45:53



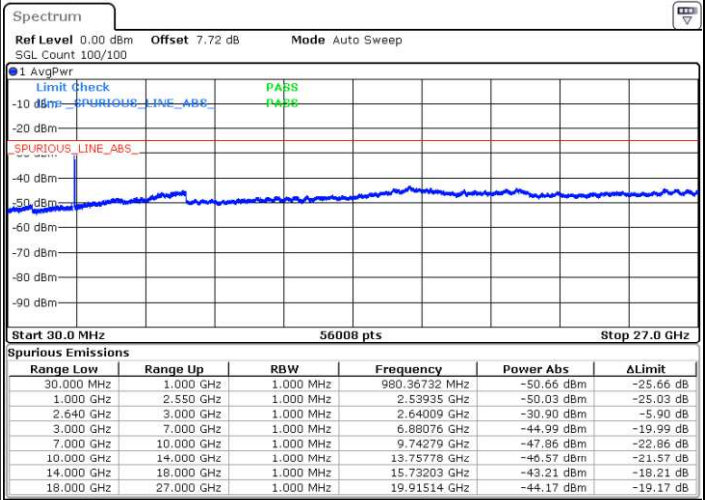
LTE Band 38 / 15MHz

Highest Channel / QPSK



Date: 9 JUL 2019 10:00:44

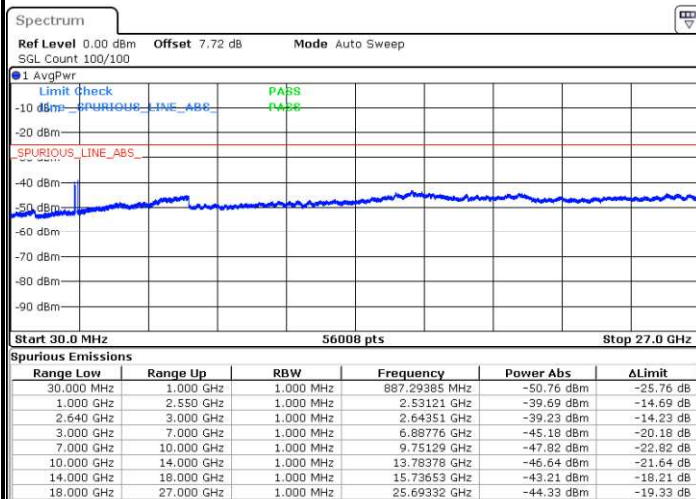
Highest Channel / 16QAM



Date: 18 MAY 2019 04:48:34

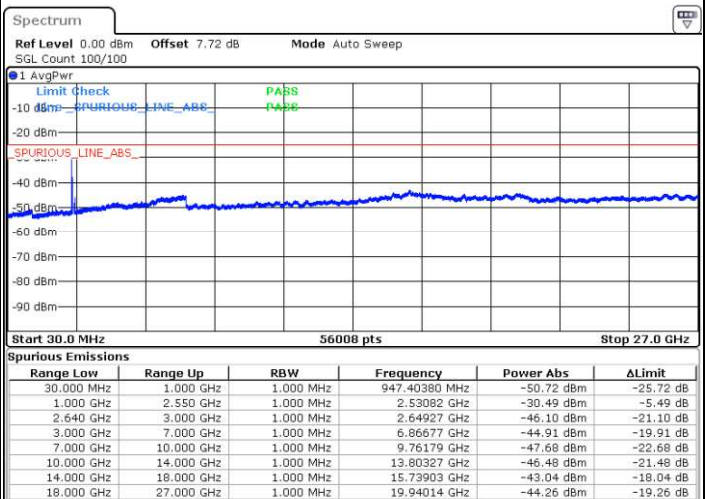
LTE Band 38 / 20MHz

Lowest Channel / QPSK



Date: 18 MAY 2019 04:58:03

Lowest Channel / 16QAM

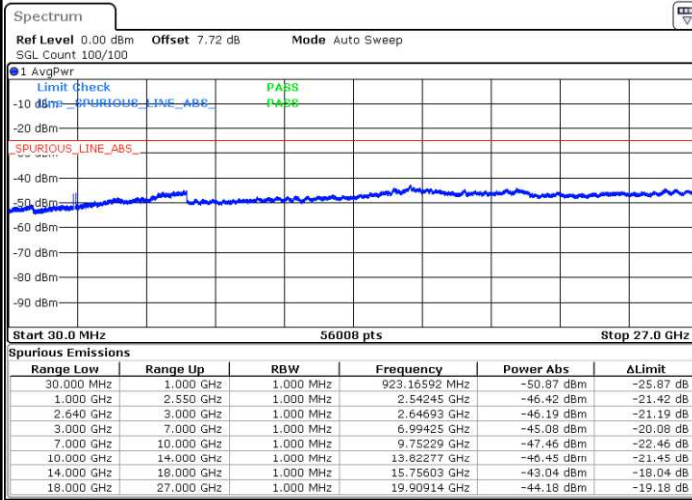


Date: 18 MAY 2019 04:58:59



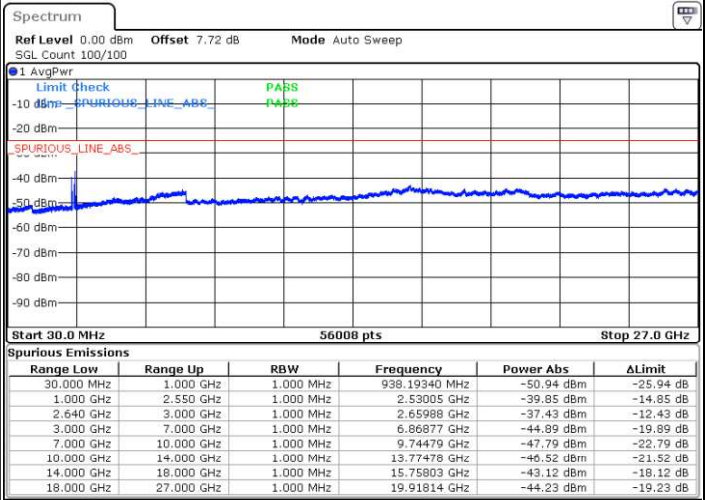
LTE Band 38 / 20MHz

Middle Channel / QPSK



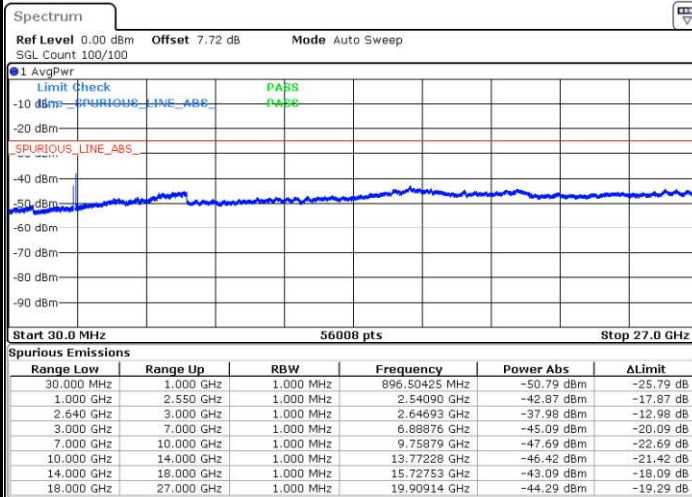
Date: 18 MAY 2019 05:00:59

Middle Channel / 16QAM



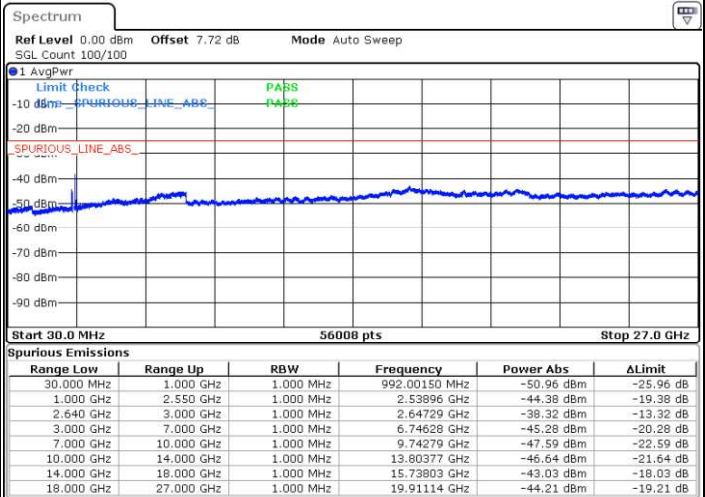
Date: 18 MAY 2019 05:01:54

Highest Channel / QPSK



Date: 18 MAY 2019 05:03:34

Highest Channel / 16QAM

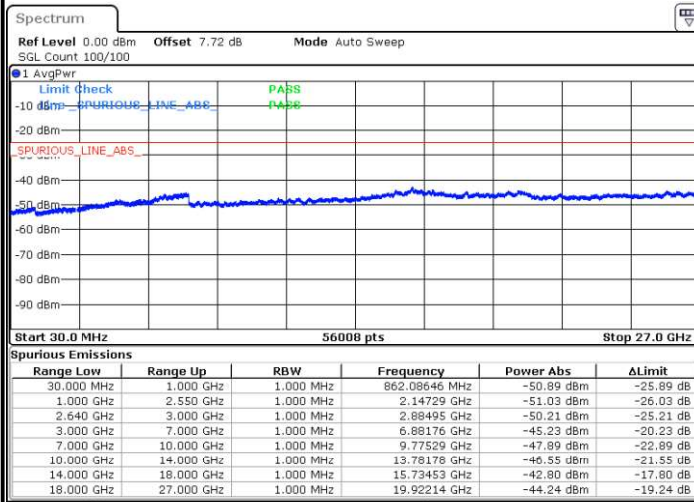


Date: 18 MAY 2019 05:04:26



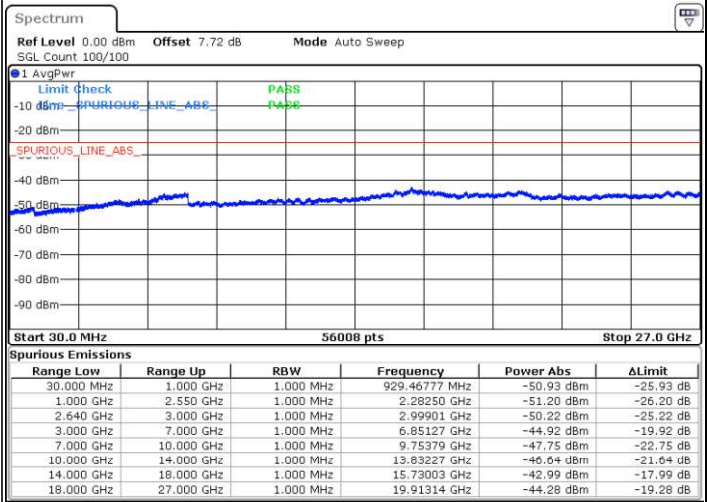
LTE Band 38 / 5MHz

Lowest Channel / 64QAM



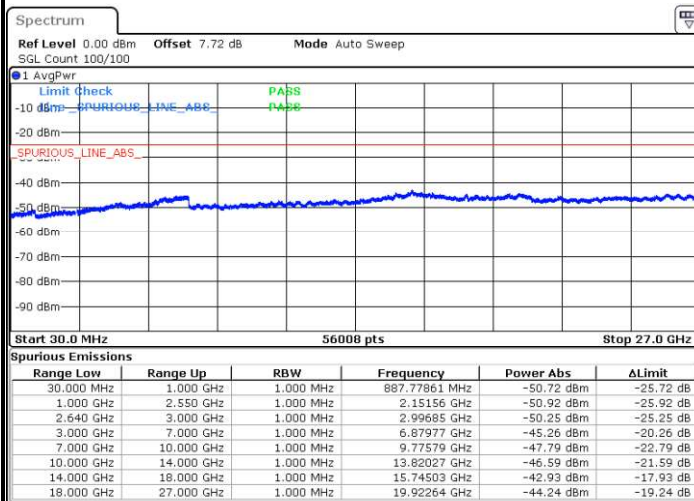
Date: 18 MAY 2019 03:57:06

Middle Channel / 64QAM



Date: 18 MAY 2019 03:59:49

Highest Channel / 64QAM

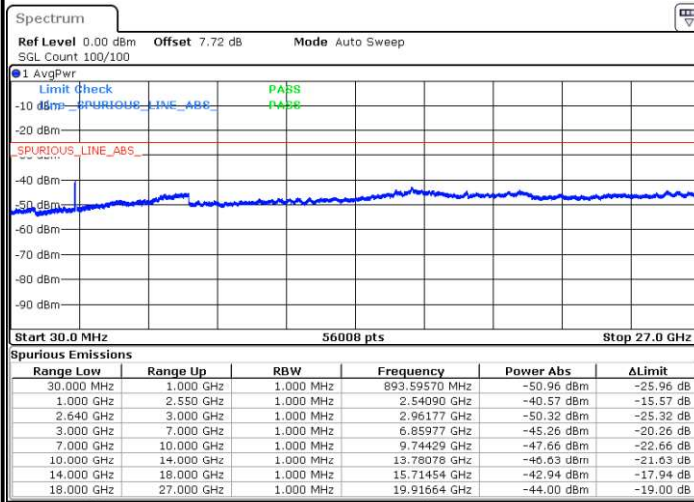


Date: 18 MAY 2019 04:02:21



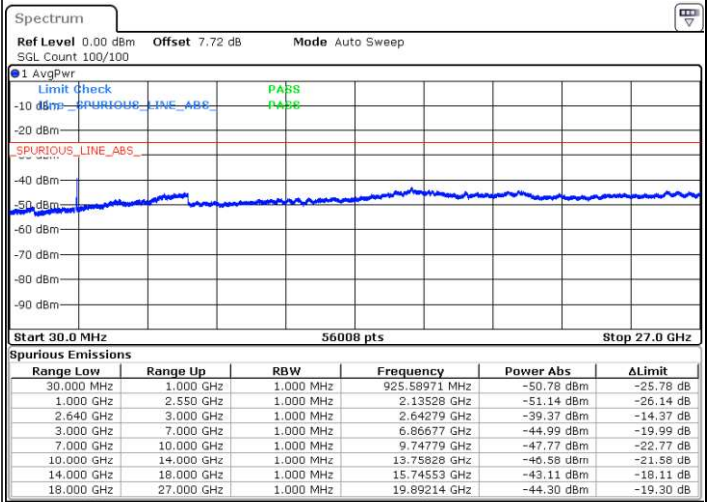
LTE Band 38 / 10MHz

Lowest Channel / 64QAM



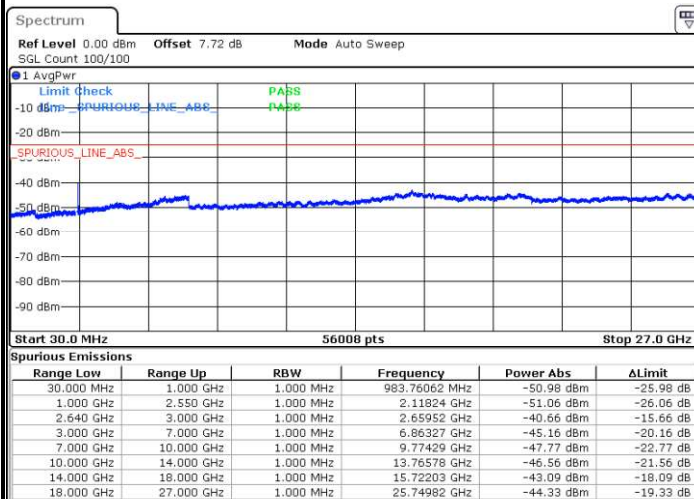
Date: 18 MAY 2019 04:22:17

Middle Channel / 64QAM



Date: 18 MAY 2019 04:24:57

Highest Channel / 64QAM

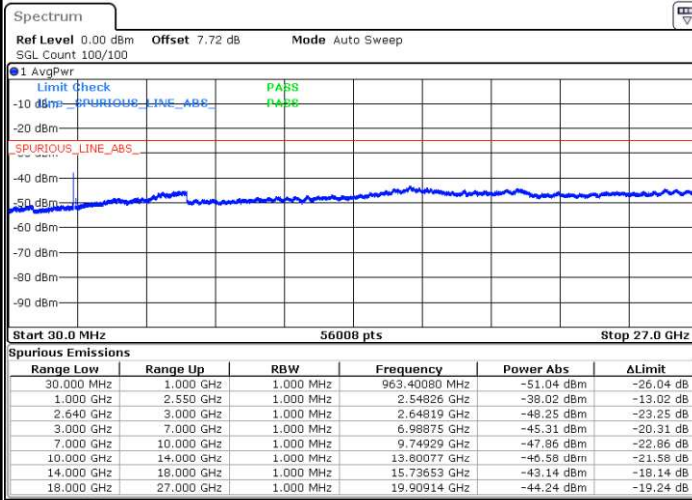


Date: 18 MAY 2019 04:27:41



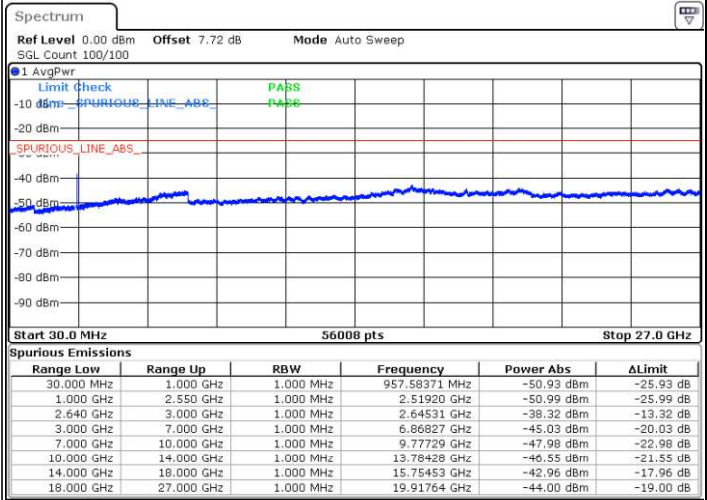
LTE Band 38 / 15MHz

Lowest Channel / 64QAM



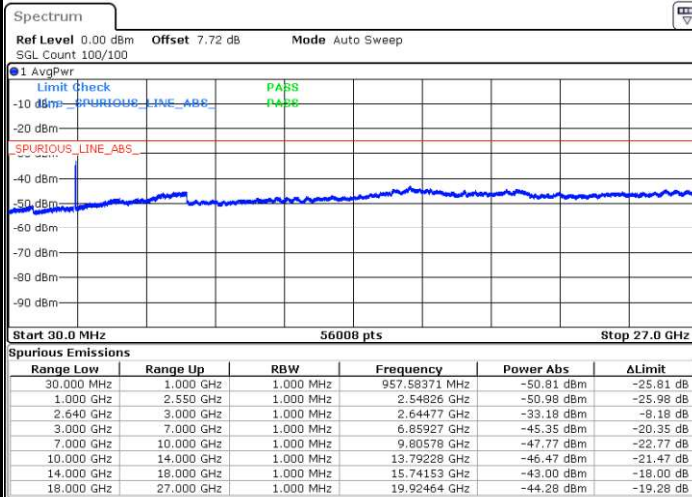
Date: 18 MAY 2019 04:44:11

Middle Channel / 64QAM



Date: 18 MAY 2019 04:46:43

Highest Channel / 64QAM

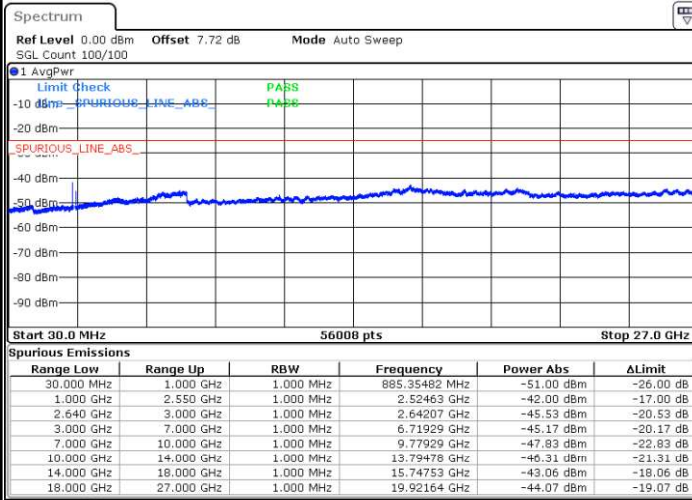


Date: 18 MAY 2019 04:49:24



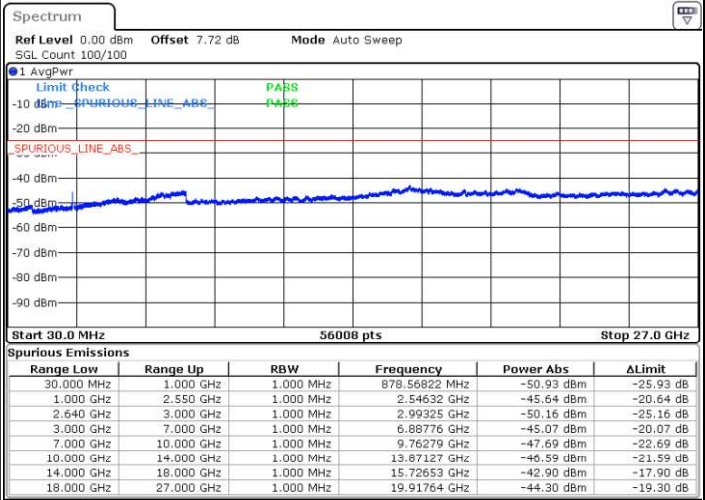
LTE Band 38 / 20MHz

Lowest Channel / 64QAM



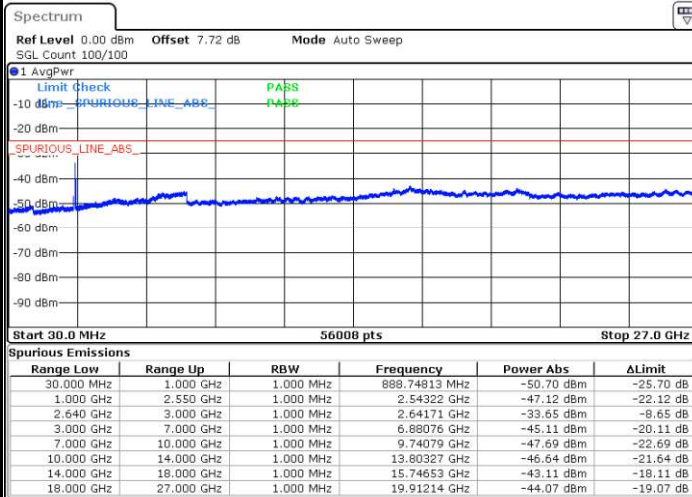
Date: 18 MAY 2019 05:00:07

Middle Channel / 64QAM



Date: 18 MAY 2019 05:02:42

Highest Channel / 64QAM



Date: 18 MAY 2019 05:05:14

**Frequency Stability**

Test Conditions		LTE Band 5 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	2.5ppm
		Deviation (ppm)	Result
50	Normal Voltage	0.0035	PASS
40	Normal Voltage	0.0054	
30	Normal Voltage	0.0006	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0047	
0	Normal Voltage	0.0054	
-10	Normal Voltage	0.0060	
-20	Normal Voltage	0.0018	
-30	Normal Voltage	0.0045	
20	Maximum Voltage	0.0004	
20	Normal Voltage	0.0030	
20	Battery End Point	0.0043	

Note: Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3V. ; Maximum Voltage =4.3 V.



Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0032	PASS
40	Normal Voltage	0.0026	
30	Normal Voltage	0.0008	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0019	
0	Normal Voltage	0.0032	
-10	Normal Voltage	0.0005	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0022	
20	Maximum Voltage	0.0018	
20	Normal Voltage	0.0024	
20	Battery End Point	0.0033	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3V. ; Maximum Voltage =4.3 V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 38 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0032	PASS
40	Normal Voltage	0.0028	
30	Normal Voltage	0.0008	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0019	
0	Normal Voltage	0.0032	
-10	Normal Voltage	0.0005	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0022	
20	Maximum Voltage	0.0016	
20	Normal Voltage	0.0024	
20	Battery End Point	0.0033	

Note:

1. Normal Voltage =3.8 V. ; Battery End Point (BEP) =3.3V. ; Maximum Voltage =4.3V.
2. Note: The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

LTE Band 5 / 10MHz / QPSK								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	1664	-58.69	-13	-45.69	-59.90	2.32	5.68	H
	2496	-67.78	-13	-54.78	-68.41	3.02	5.80	H
	3327	-66.79	-13	-53.79	-69.25	3.27	7.88	H
	1664	-62.35	-13	-49.35	-63.56	2.32	5.68	V
	2496	-67.81	-13	-54.81	-68.44	3.02	5.80	V
	3327	-66.76	-13	-53.76	-69.22	3.27	7.88	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 7 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5052	-62.26	-25	-37.26	-72.47	3.03	13.24	H
	7580	-59.96	-25	-34.96	-69.41	3.56	13.01	H
	10104	-58.03	-25	-33.03	-67.55	3.92	13.44	H
	5052	-52.98	-25	-27.98	-63.19	3.03	13.24	V
	7580	-58.02	-25	-33.02	-67.47	3.56	13.01	V
	10104	-57.59	-25	-32.59	-67.11	3.92	13.44	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

LTE Band 38 / 20MHz / QPSK								
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Middle	5172	-57.02	-25	-32.02	-67.23	3.03	13.24	H
	7760	-59.27	-25	-34.27	-68.72	3.56	13.01	H
	10344	-59.15	-25	-34.15	-68.67	3.92	13.44	H
	5172	-48.10	-25	-23.10	-58.31	3.03	13.24	V
	7760	-56.53	-25	-31.53	-65.98	3.56	13.01	V
	10344	-57.88	-25	-32.88	-67.40	3.92	13.44	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

Appendix C. Setup Photographs

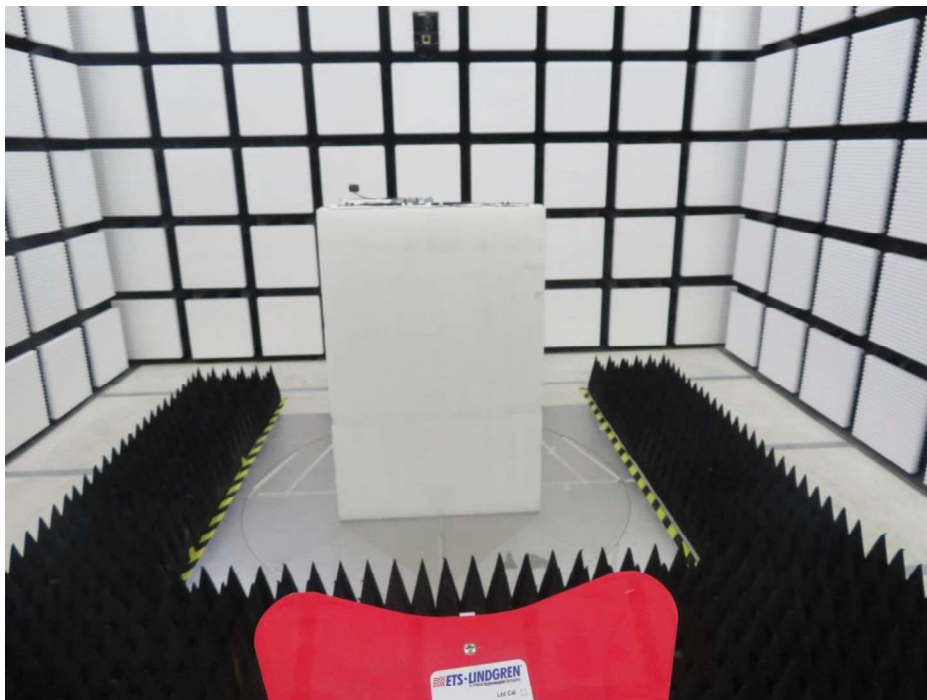
<Radiated Emission>

For Band 5

LF



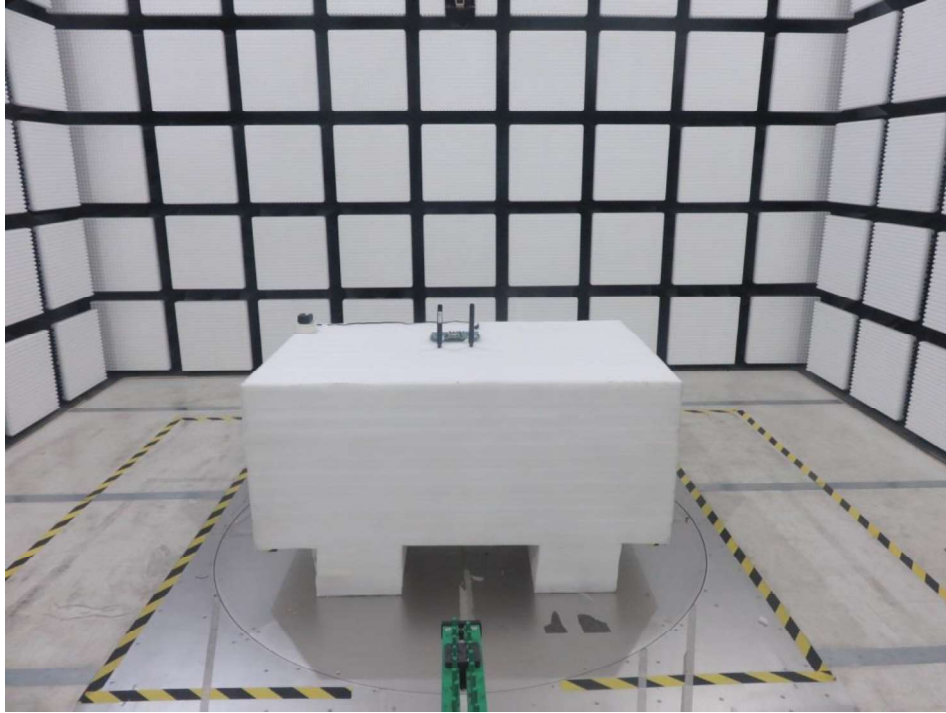
HF



<Radiated Emission>

For Band 7 / 38

LF



HF

