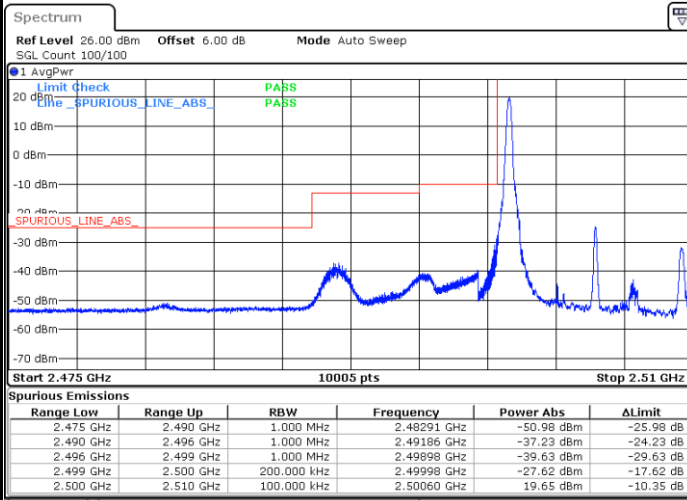




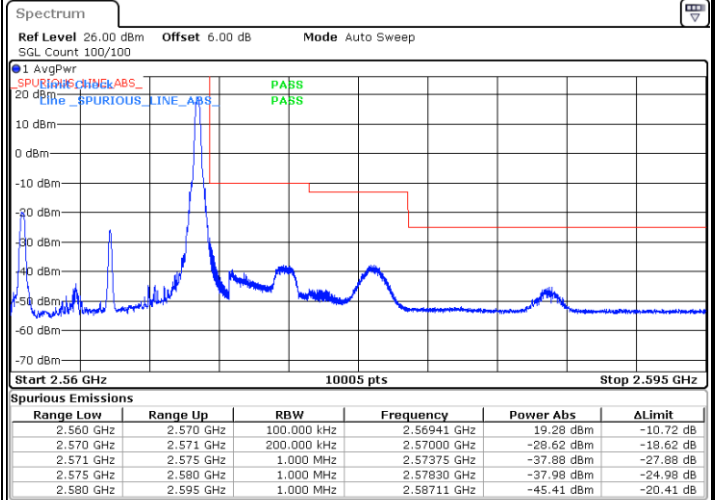
LTE Band 7 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



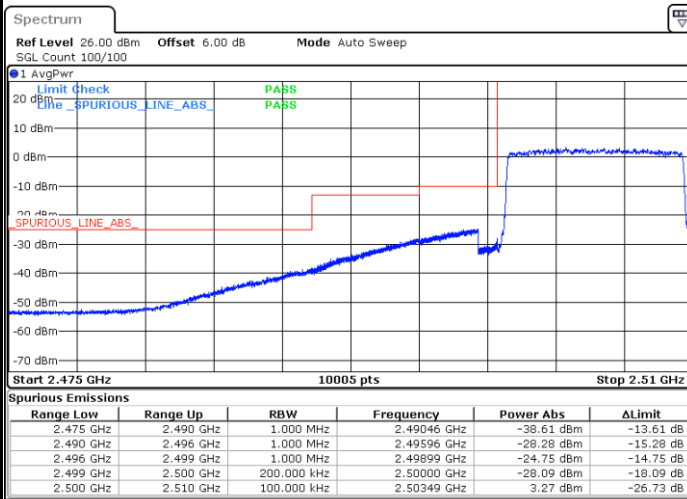
Date: 21 JUN 2019 13:55:32

Highest Band Edge / 1 RB



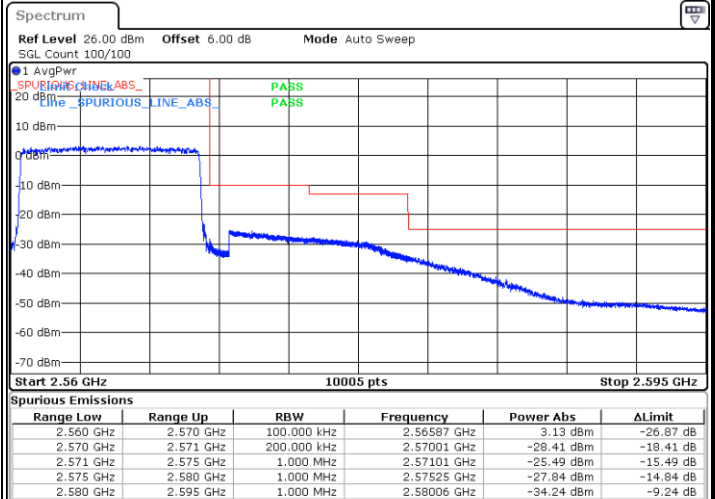
Date: 21 JUN 2019 14:01:13

Lowest Band Edge / Full RB



Date: 21 JUN 2019 13:56:40

Highest Band Edge / Full RB

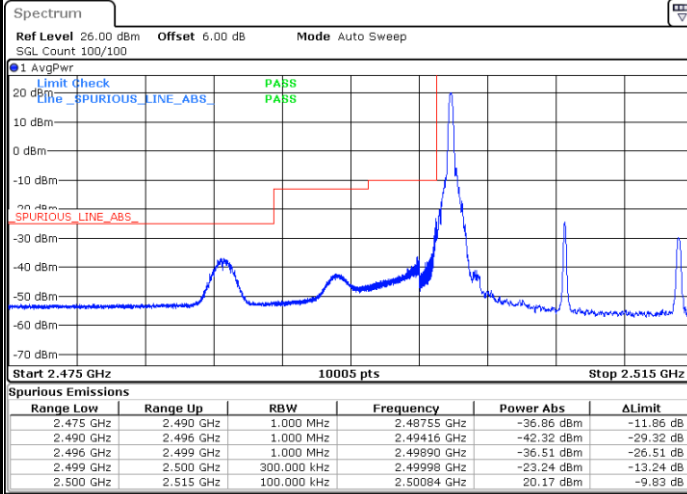


Date: 21 JUN 2019 14:00:05



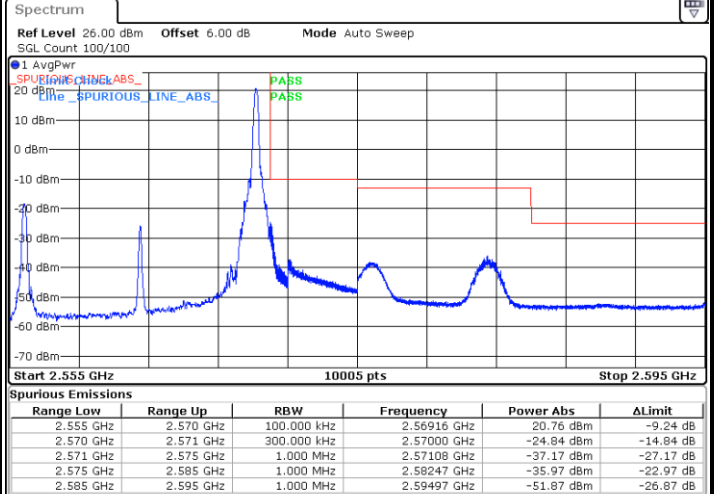
LTE Band 7 / 15MHz / QPSK

Lowest Band Edge / 1 RB



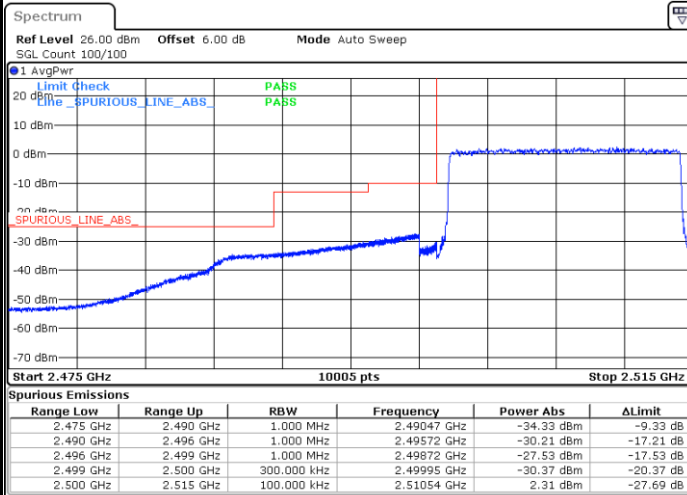
Date: 21 JUN 2019 14:10:54

Highest Band Edge / 1 RB



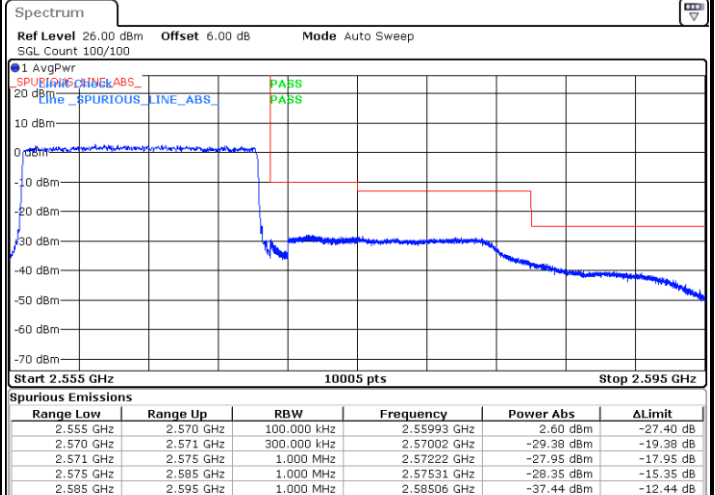
Date: 21 JUN 2019 14:18:52

Lowest Band Edge / Full RB



Date: 21 JUN 2019 14:14:20

Highest Band Edge / Full RB

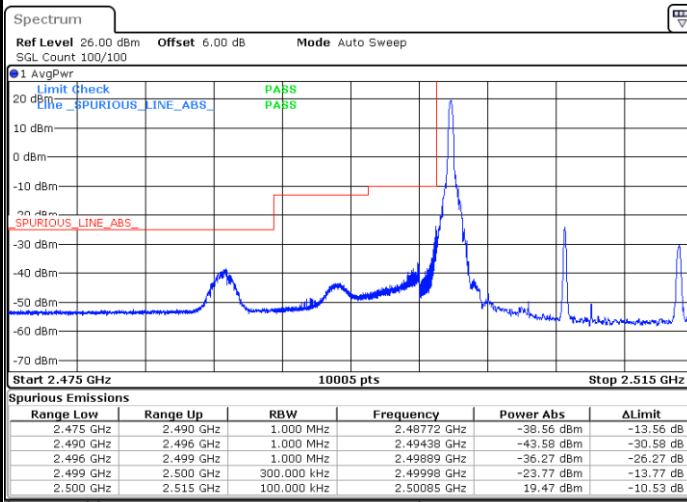


Date: 21 JUN 2019 14:15:28



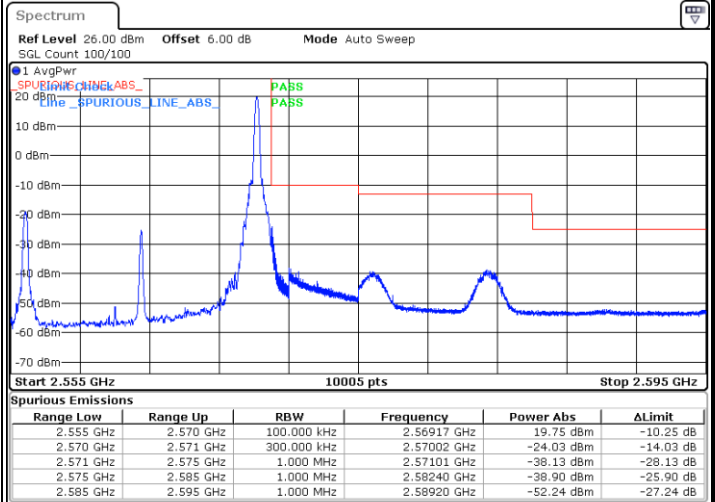
LTE Band 7 / 15MHz / 16QAM

Lowest Band Edge / 1 RB



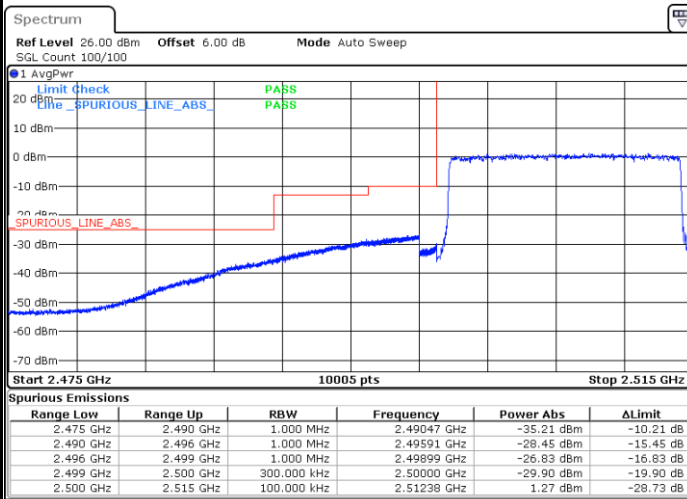
Date: 21 JUN 2019 14:12:03

Highest Band Edge / 1 RB



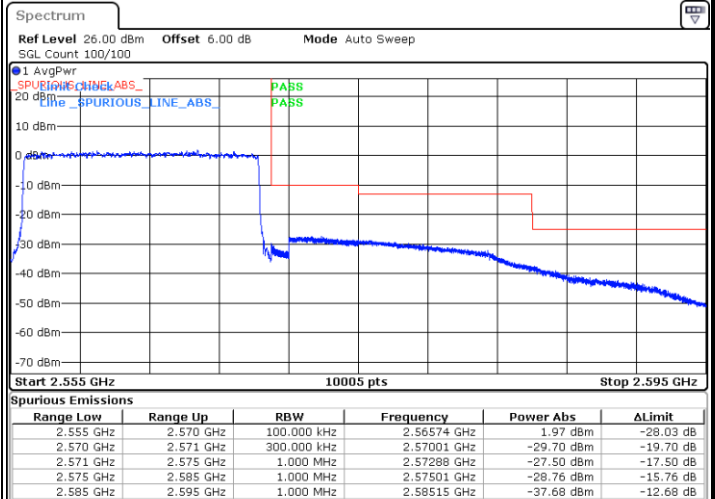
Date: 21 JUN 2019 14:17:44

Lowest Band Edge / Full RB



Date: 21 JUN 2019 14:13:11

Highest Band Edge / Full RB

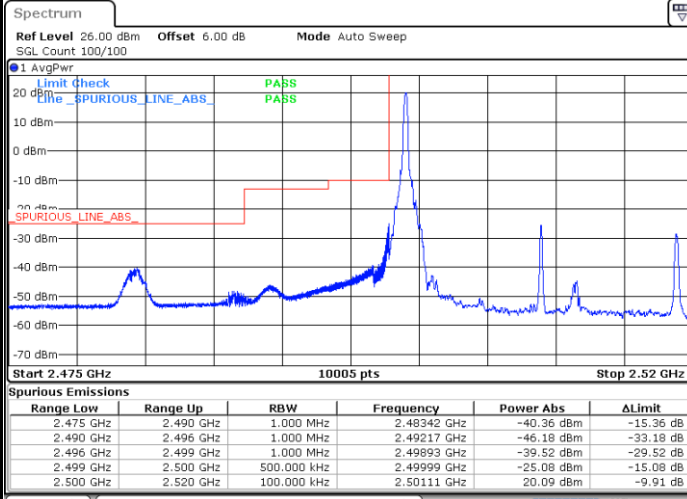


Date: 21 JUN 2019 14:16:36



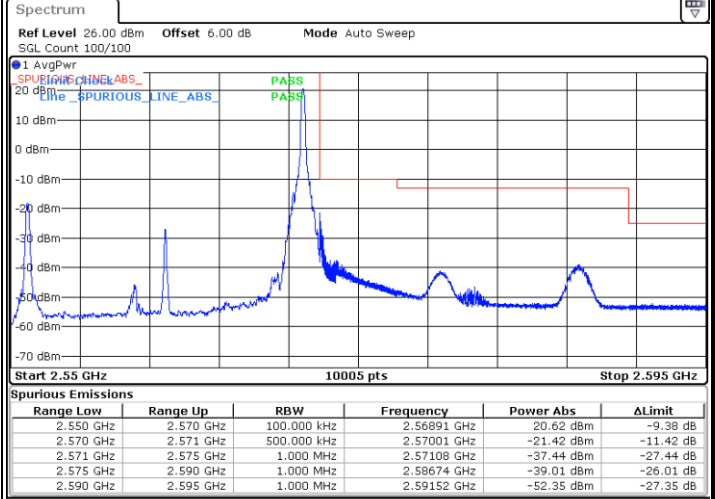
LTE Band 7 / 20MHz / QPSK

Lowest Band Edge / 1 RB



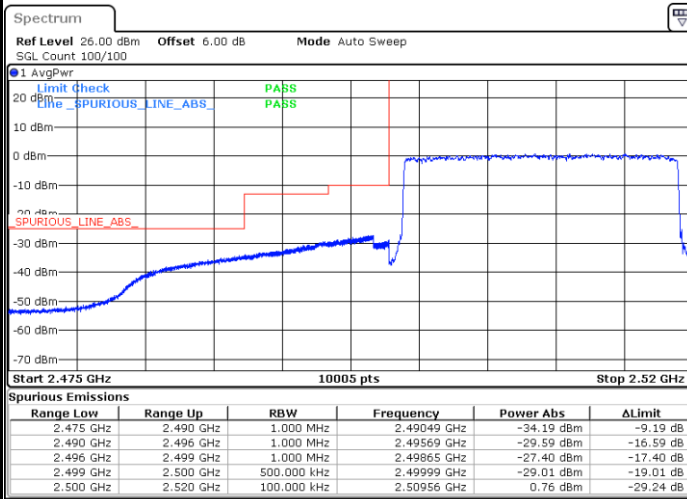
Date: 21 JUN 2019 14:29:33

Highest Band Edge / 1 RB



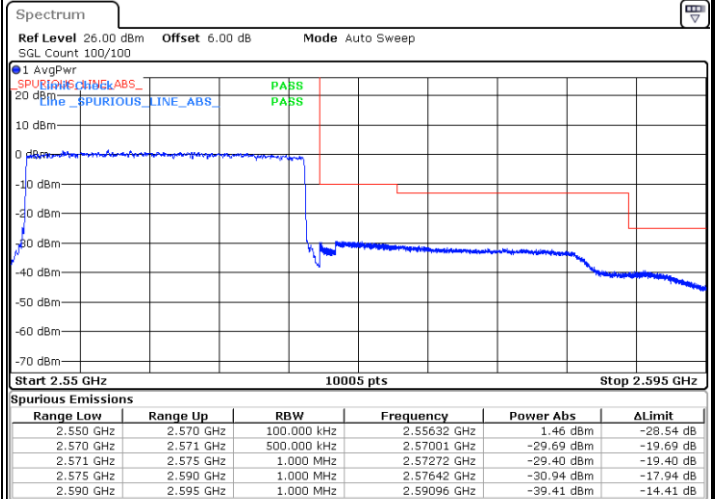
Date: 21 JUN 2019 14:37:31

Lowest Band Edge / Full RB



Date: 21 JUN 2019 14:32:59

Highest Band Edge / Full RB

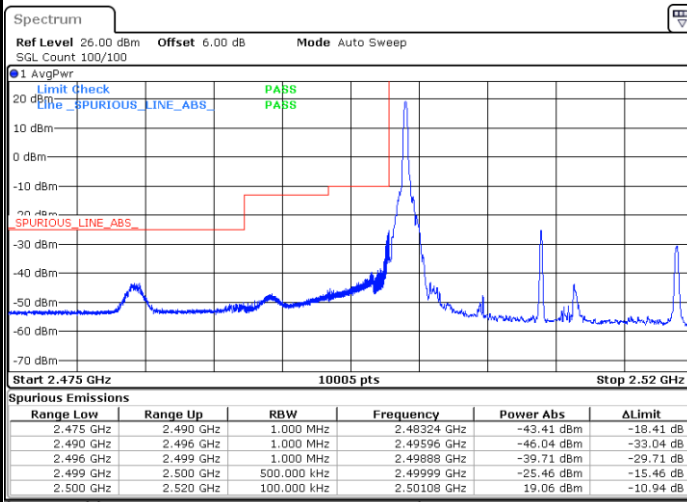


Date: 21 JUN 2019 14:34:07



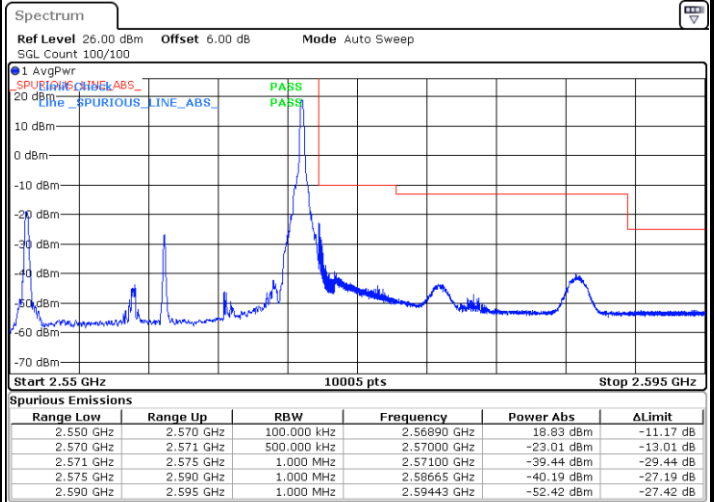
LTE Band 7 / 20MHz / 16QAM

Lowest Band Edge / 1 RB



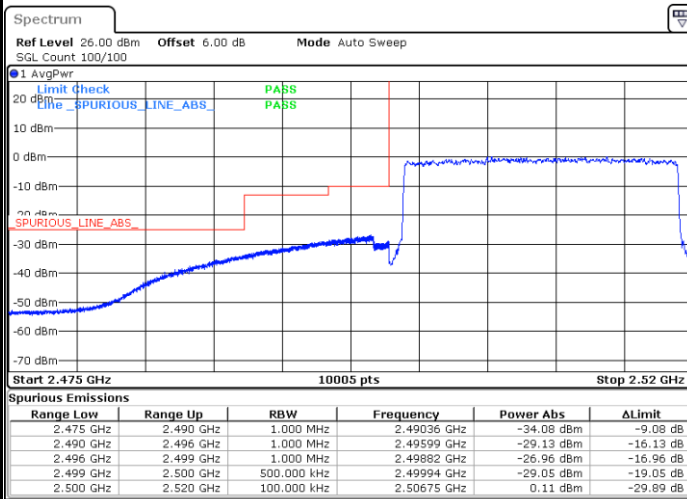
Date: 21 JUN 2019 14:30:42

Highest Band Edge / 1RB



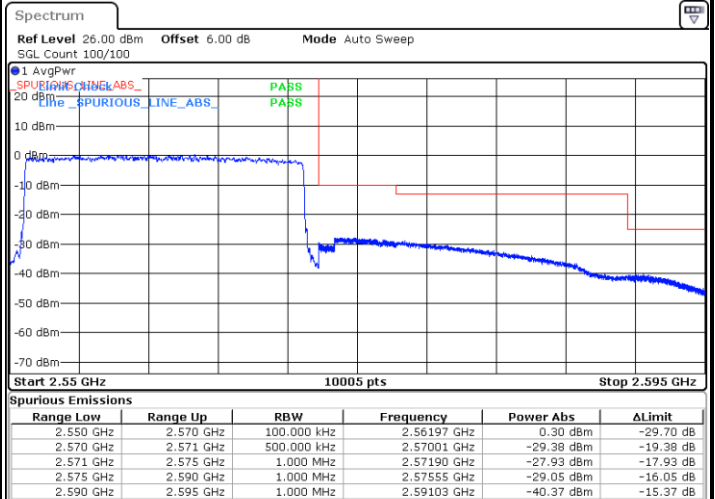
Date: 21 JUN 2019 14:36:23

Lowest Band Edge / Full RB



Date: 21 JUN 2019 14:31:50

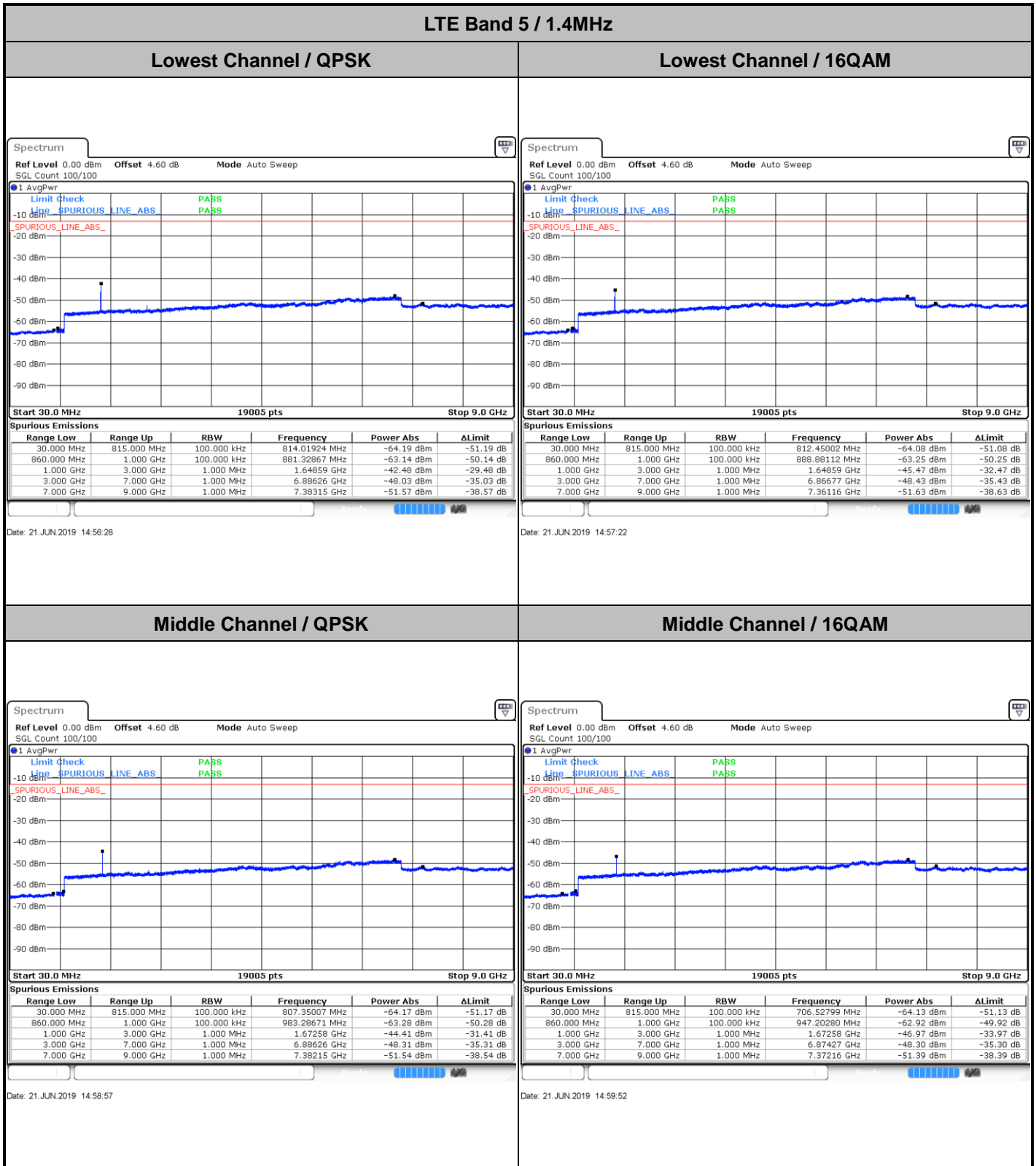
Highest Band Edge / Full RB



Date: 21 JUN 2019 14:35:15



Conducted Spurious Emission

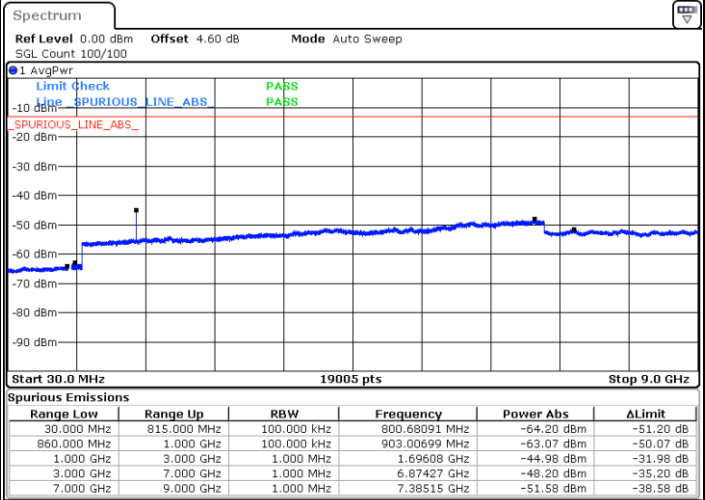
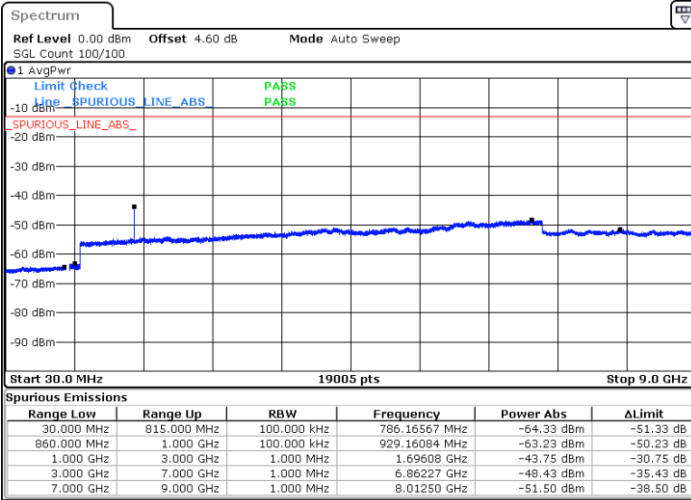




LTE Band 5 / 1.4MHz

Highest Channel / QPSK

Highest Channel / 16QAM



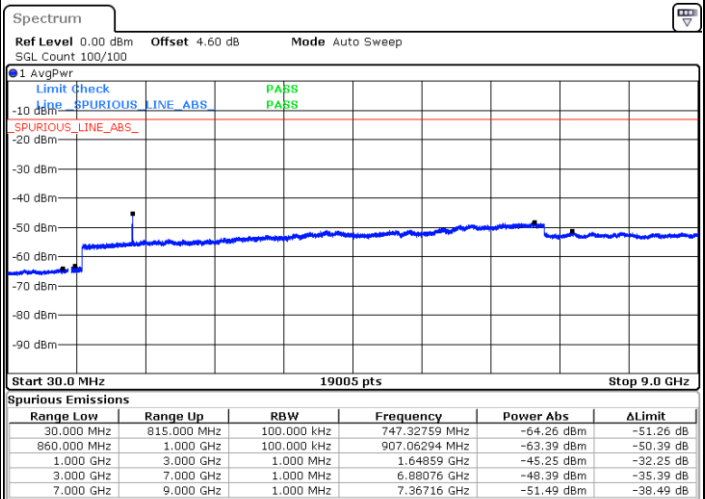
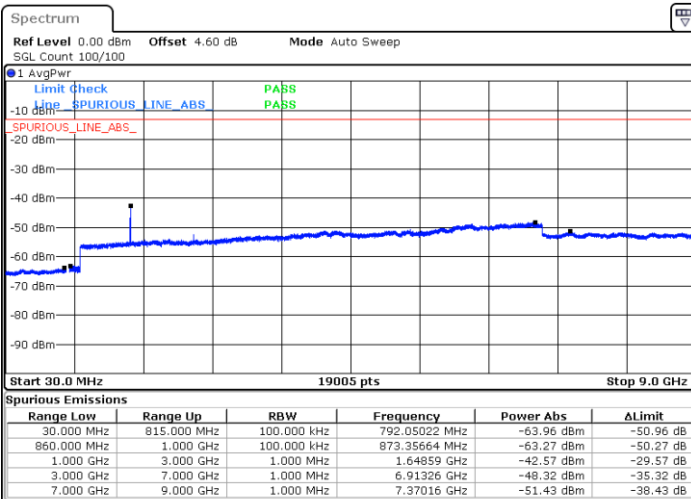
Date: 21 JUN 2019 15:07:57

Date: 21 JUN 2019 15:08:51

LTE Band 5 / 3MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



Date: 21 JUN 2019 15:16:57

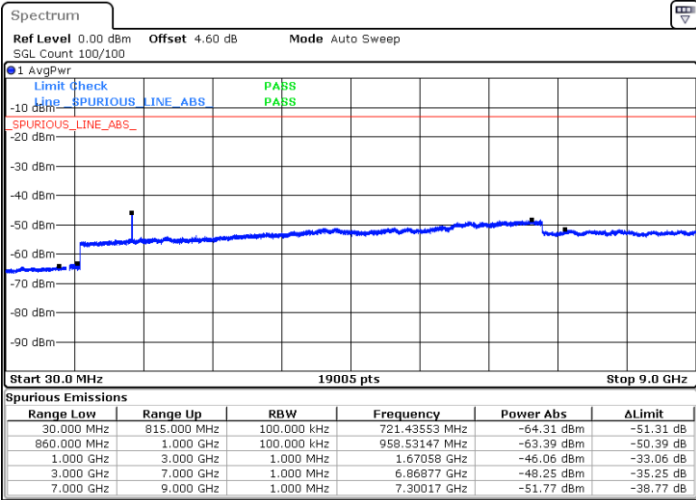
Date: 21 JUN 2019 15:17:51



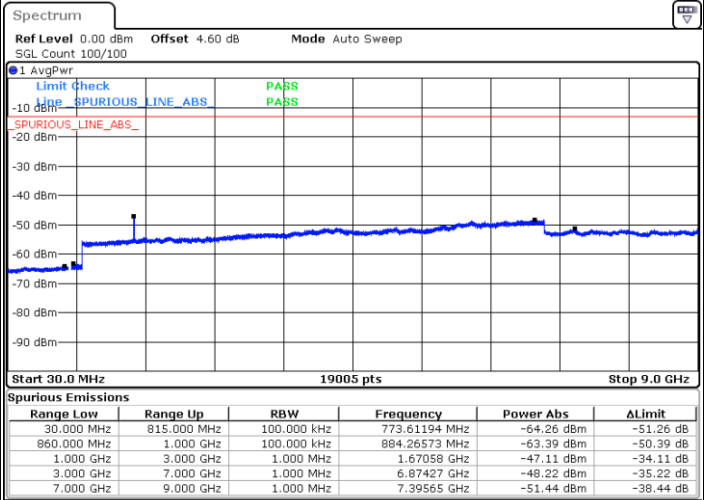
LTE Band 5 / 3MHz

Middle Channel / QPSK

Middle Channel / 16QAM



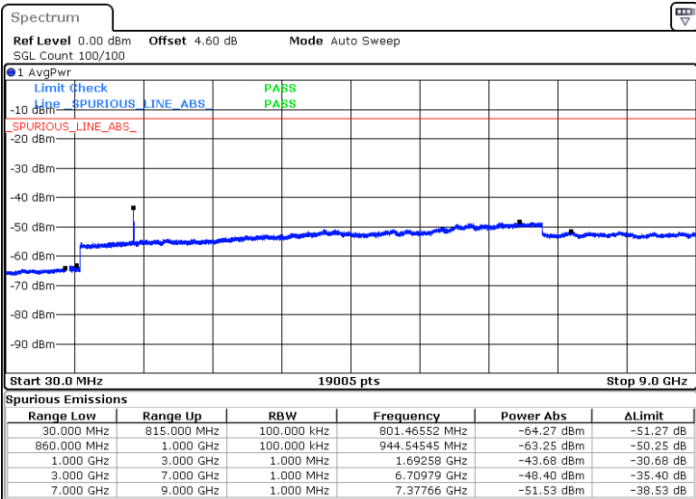
Date: 21 JUN 2019 15:19:26



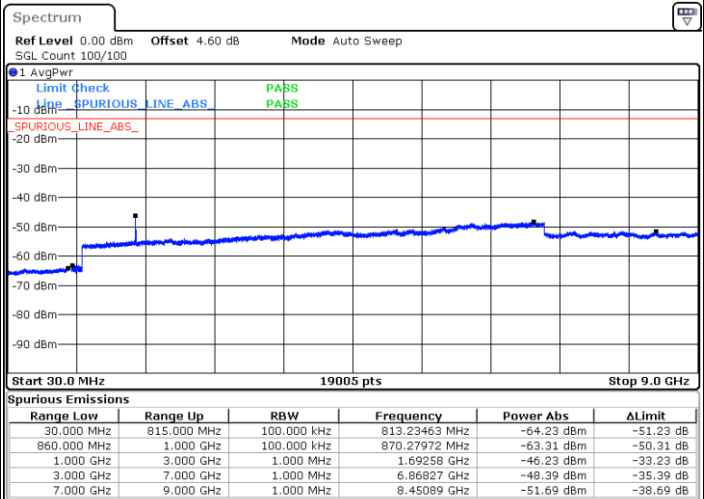
Date: 21 JUN 2019 15:20:21

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 21 JUN 2019 15:28:26



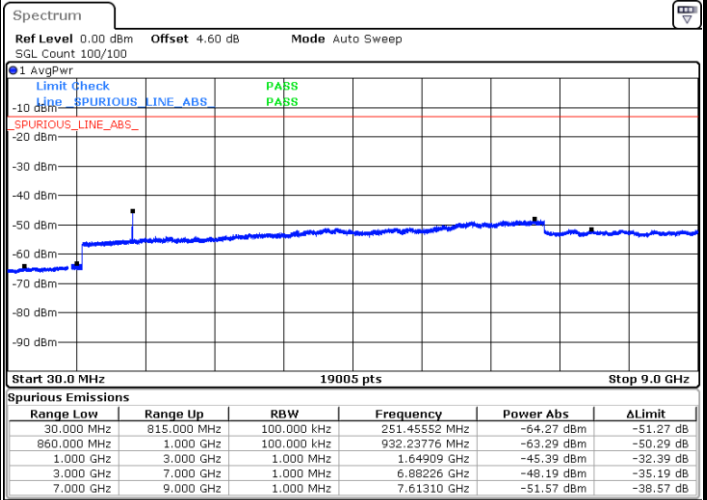
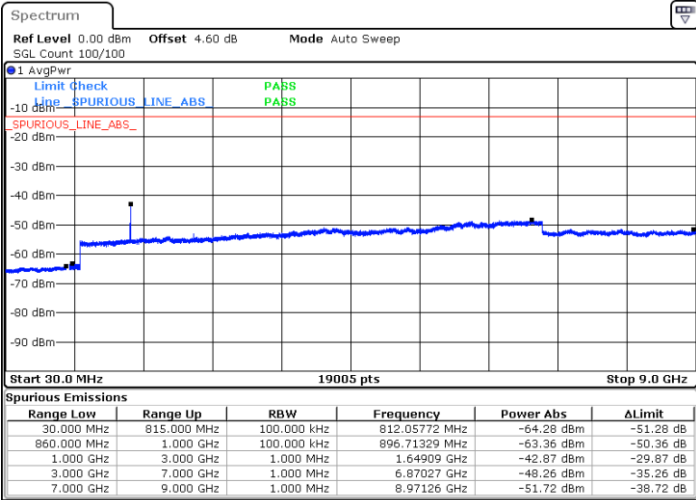
Date: 21 JUN 2019 15:29:20



LTE Band 5 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

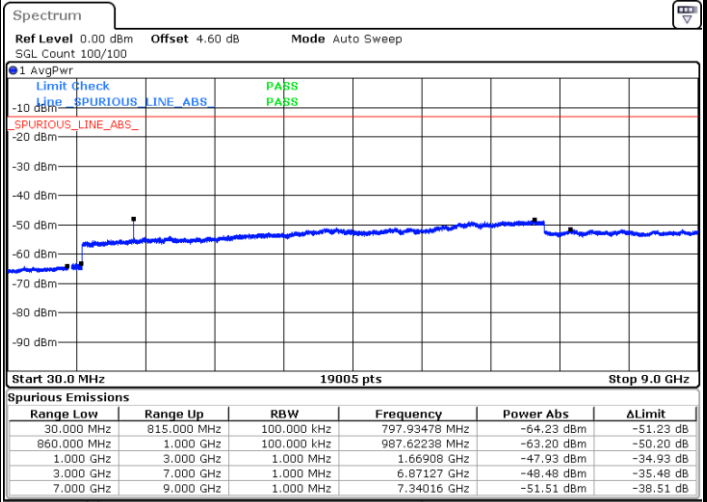
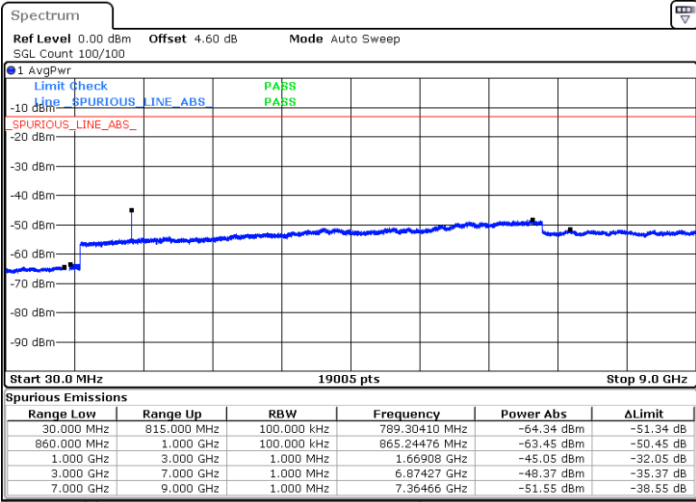


Date: 21 JUN 2019 15:37:26

Date: 21 JUN 2019 15:38:20

Middle Channel / QPSK

Middle Channel / 16QAM



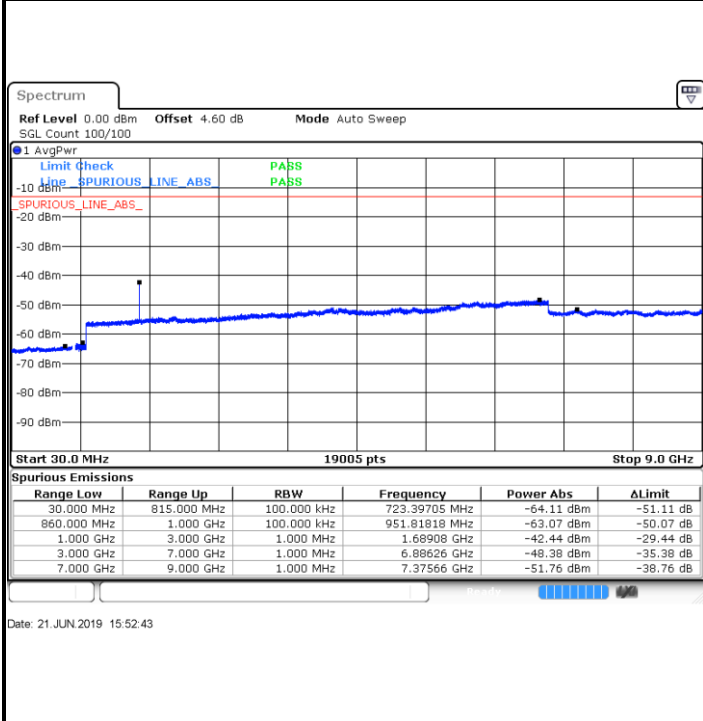
Date: 21 JUN 2019 15:39:55

Date: 21 JUN 2019 15:44:38

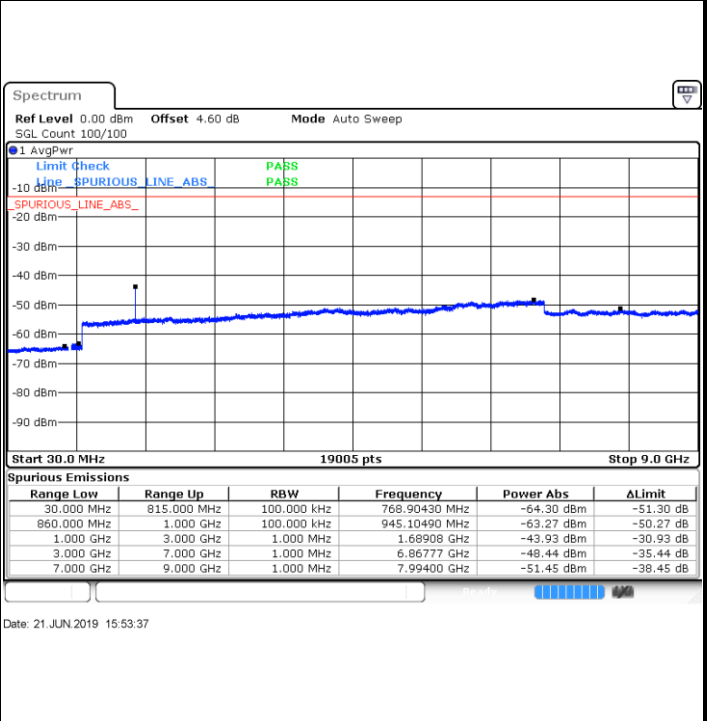


LTE Band 5 / 5MHz

Highest Channel / QPSK

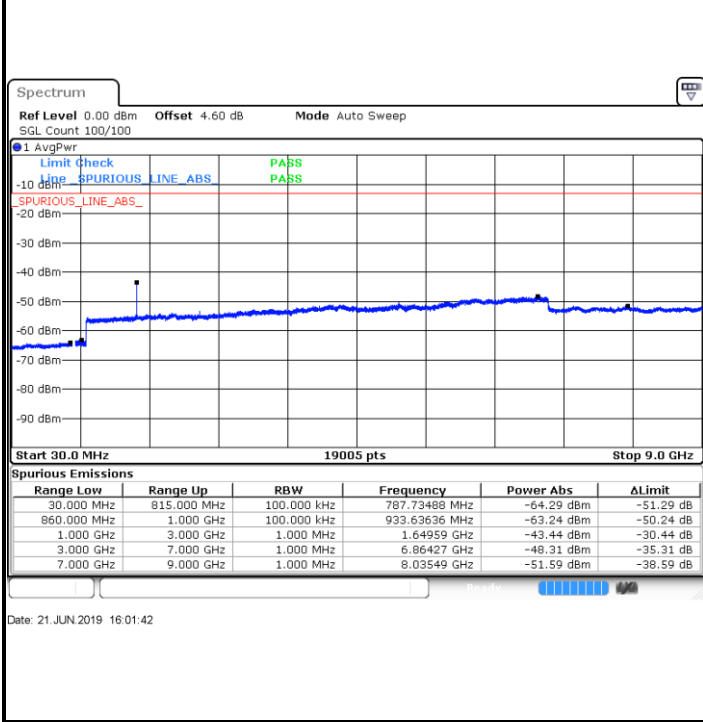


Highest Channel / 16QAM

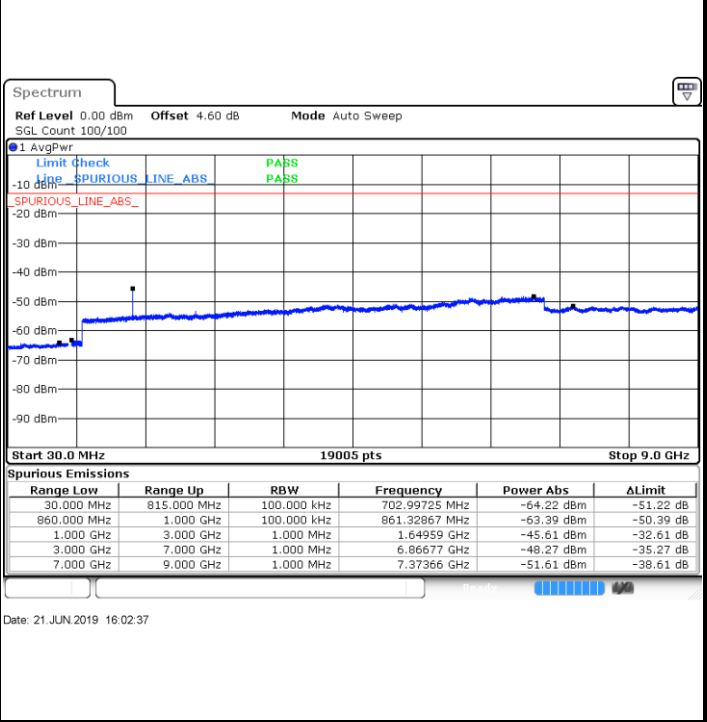


LTE Band 5 / 10MHz

Lowest Channel / QPSK



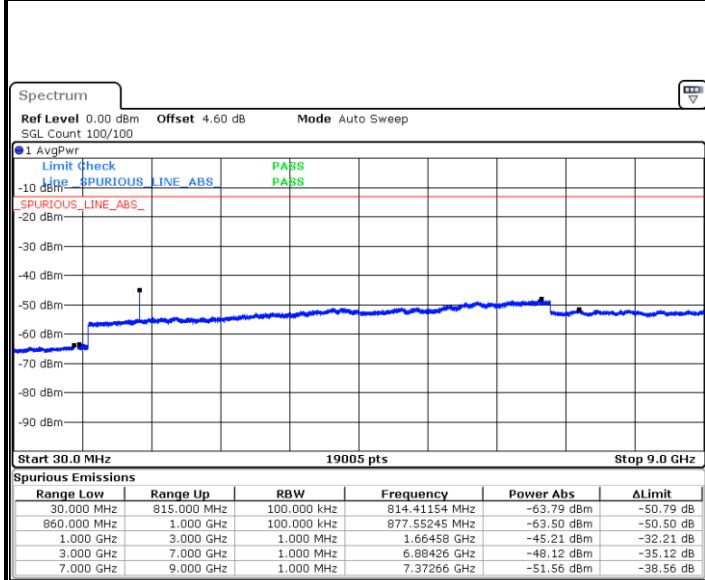
Lowest Channel / 16QAM





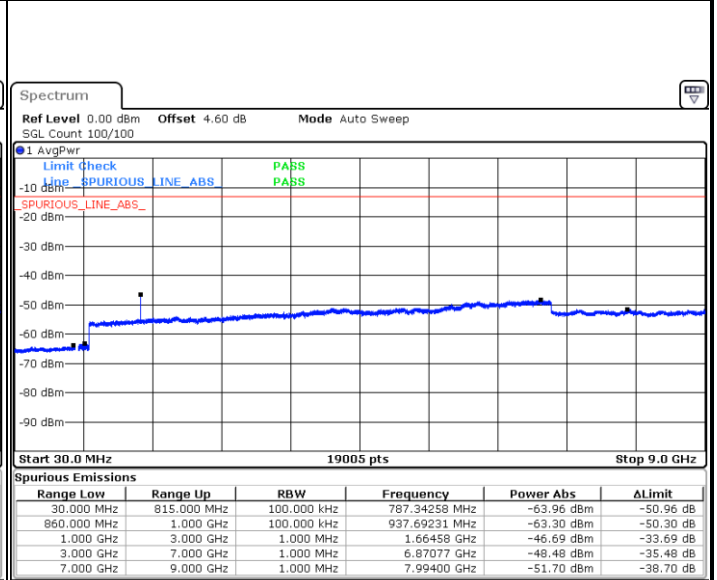
LTE Band 5 / 10MHz

Middle Channel / QPSK



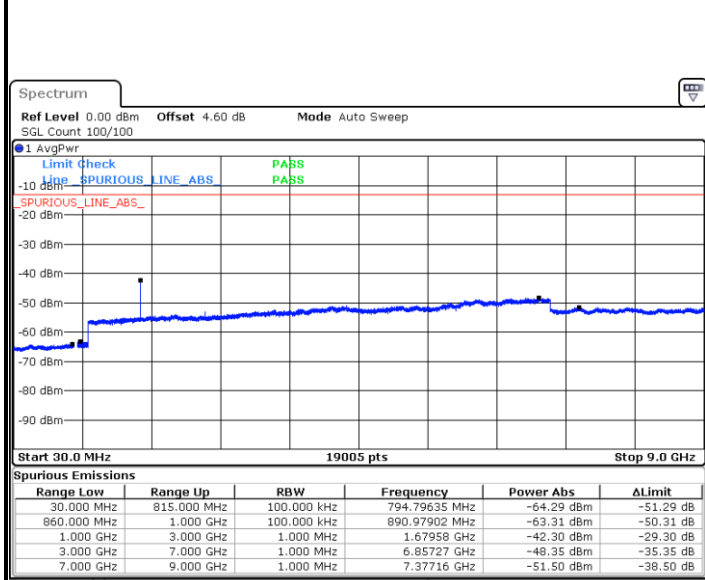
Date: 21 JUN 2019 16:04:11

Middle Channel / 16QAM



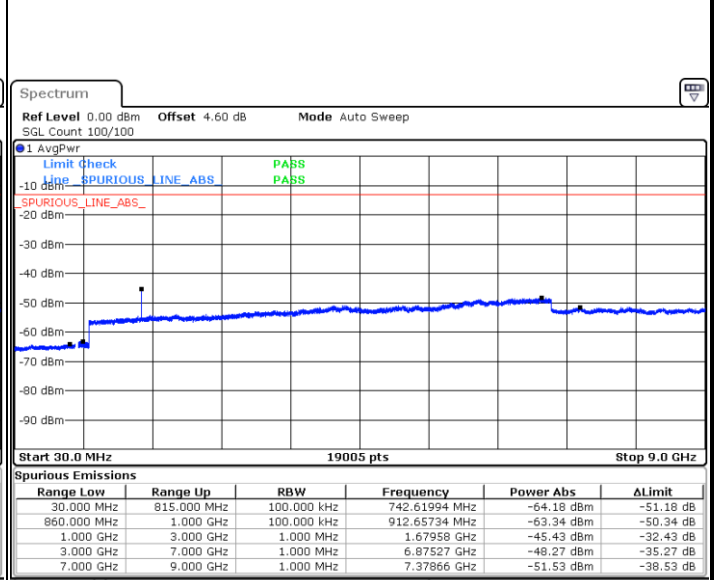
Date: 21 JUN 2019 16:05:06

Highest Channel / QPSK



Date: 21 JUN 2019 16:13:11

Highest Channel / 16QAM



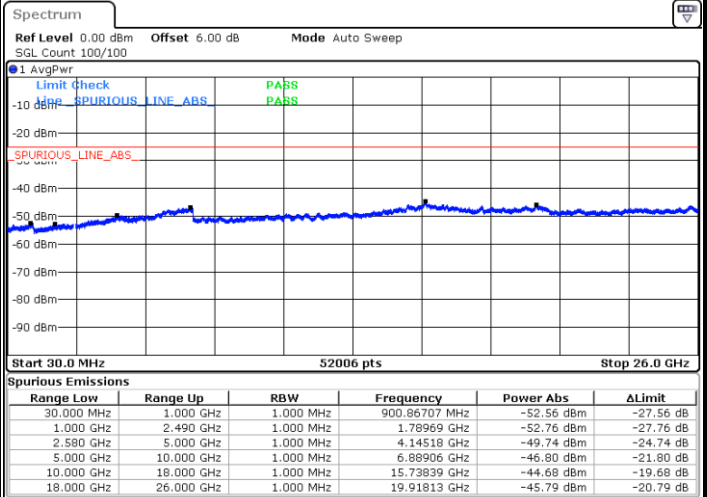
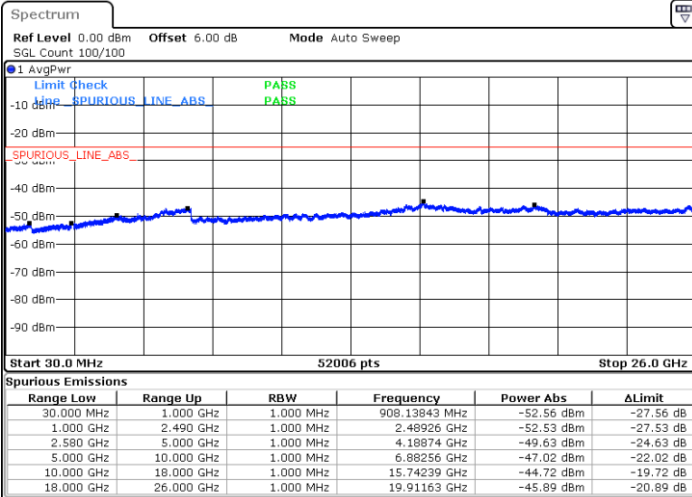
Date: 21 JUN 2019 16:14:05



LTE Band 7 / 5MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM

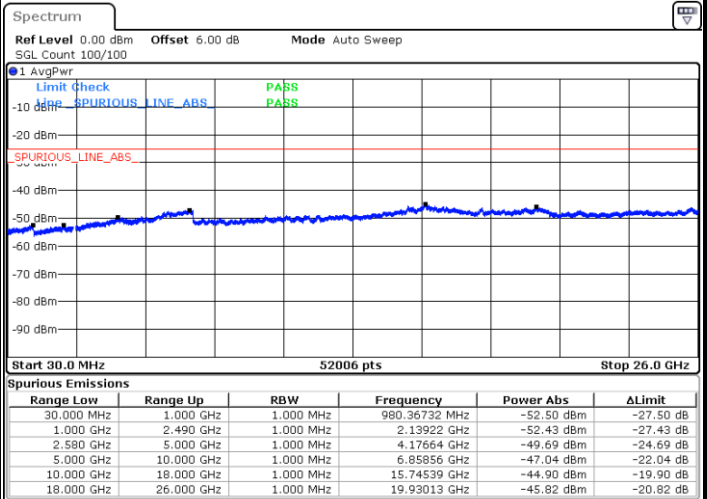
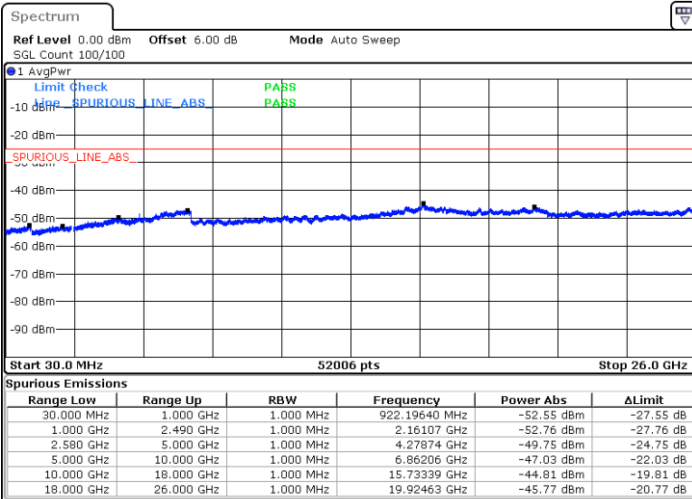


Date: 21 JUN 2019 13:41:56

Date: 21 JUN 2019 13:42:50

Middle Channel / QPSK

Middle Channel / 16QAM



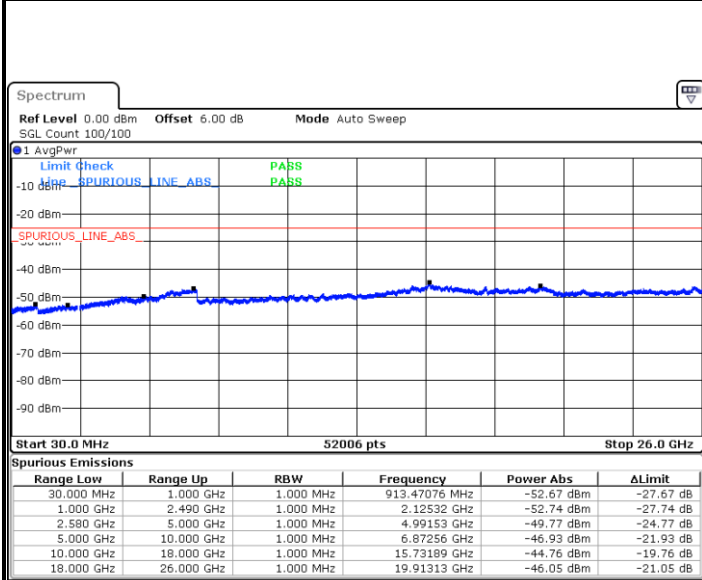
Date: 21 JUN 2019 13:44:38

Date: 21 JUN 2019 13:43:44



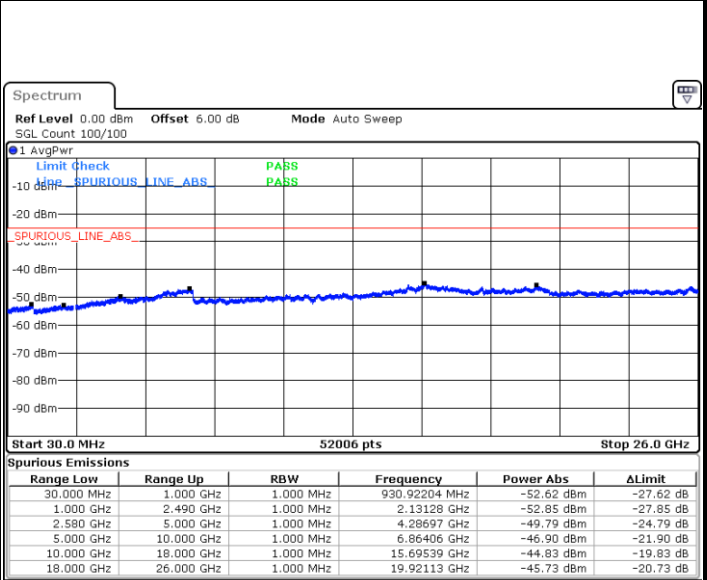
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 21 JUN 2019 13:45:32

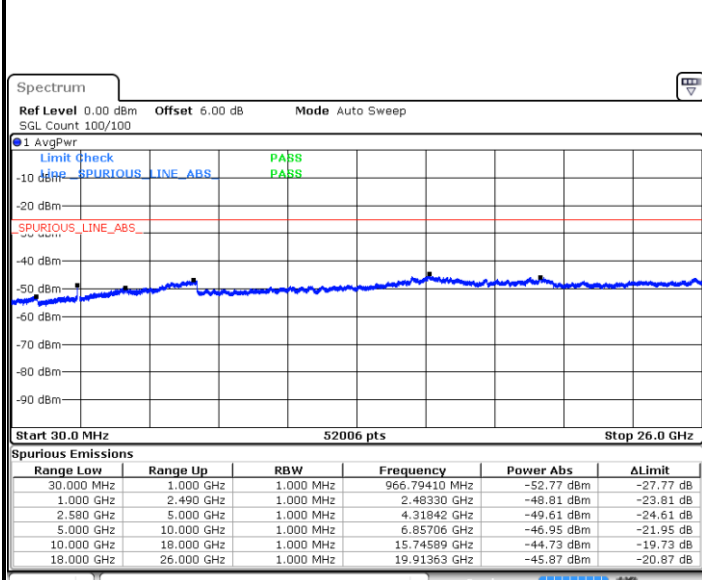
Highest Channel / 16QAM



Date: 21 JUN 2019 13:51:14

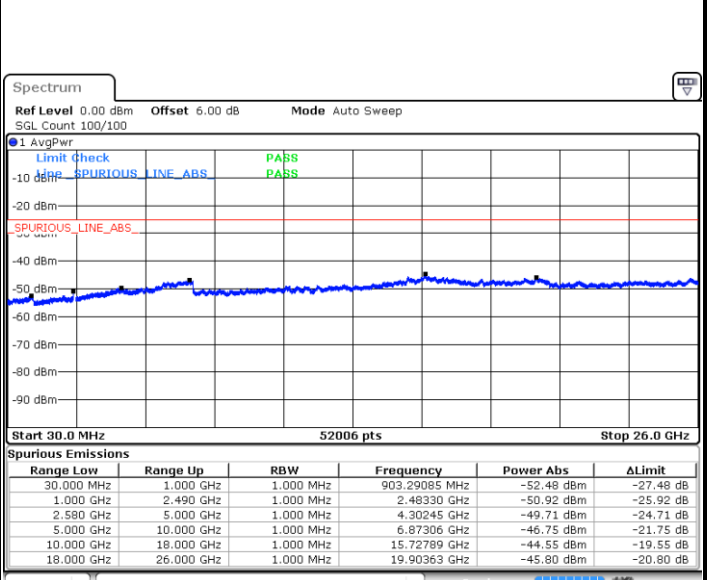
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 21 JUN 2019 14:03:14

Lowest Channel / 16QAM



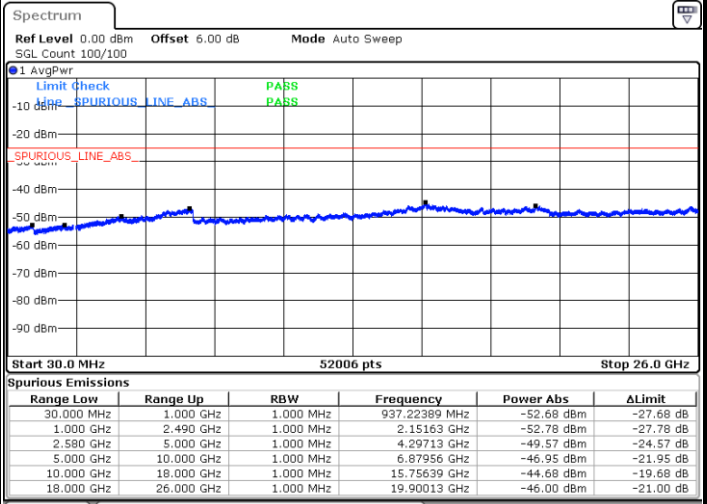
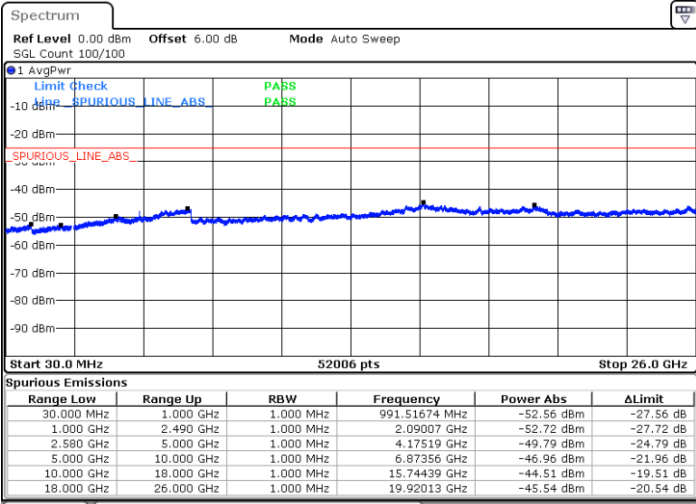
Date: 21 JUN 2019 14:04:08



LTE Band 7 / 10MHz

Middle Channel / QPSK

Middle Channel / 16QAM

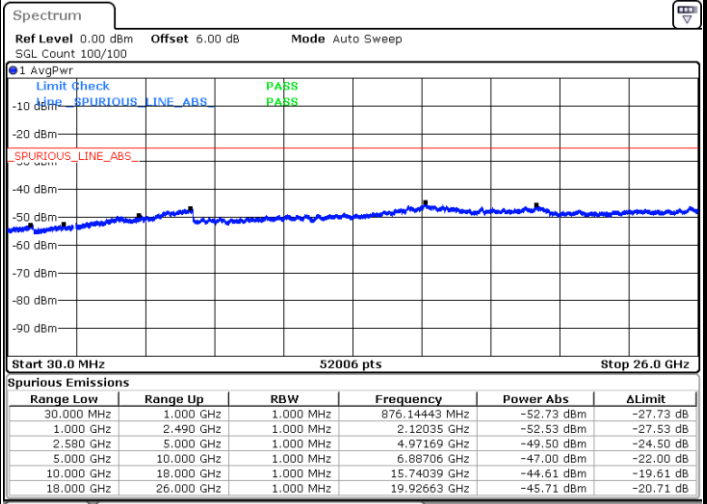
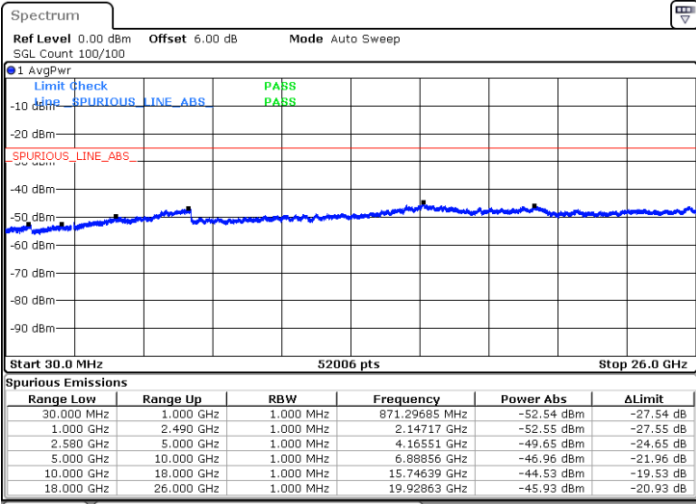


Date: 21 JUN 2019 14:05:56

Date: 21 JUN 2019 14:05:02

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 21 JUN 2019 14:06:50

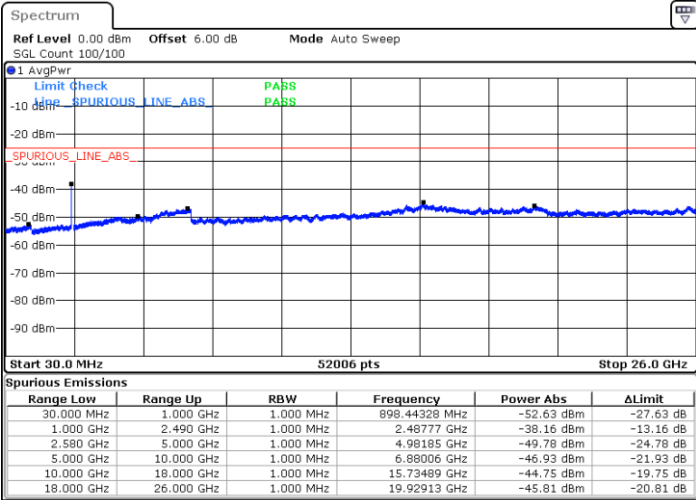
Date: 21 JUN 2019 14:07:44



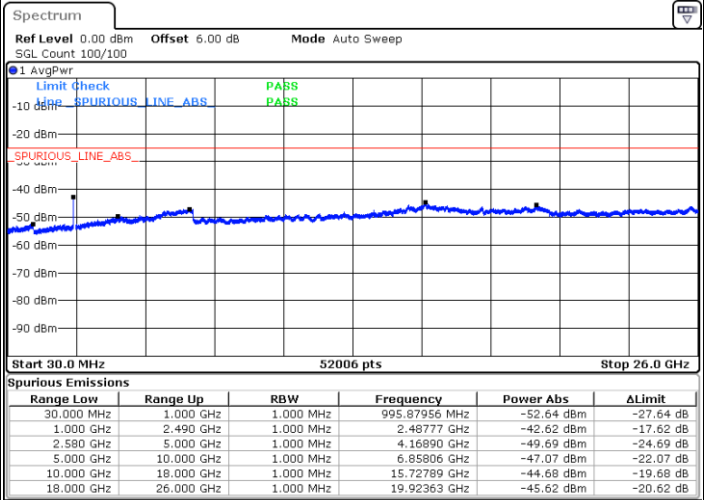
LTE Band 7 / 15MHz

Lowest Channel / QPSK

Lowest Channel / 16QAM



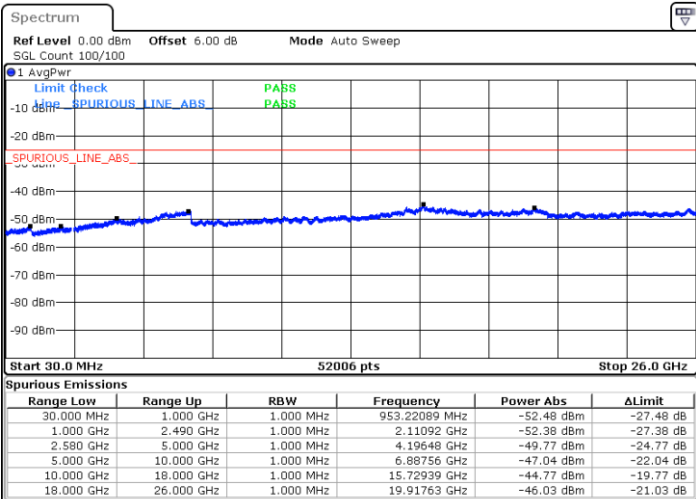
Date: 21 JUN 2019 14:19:45



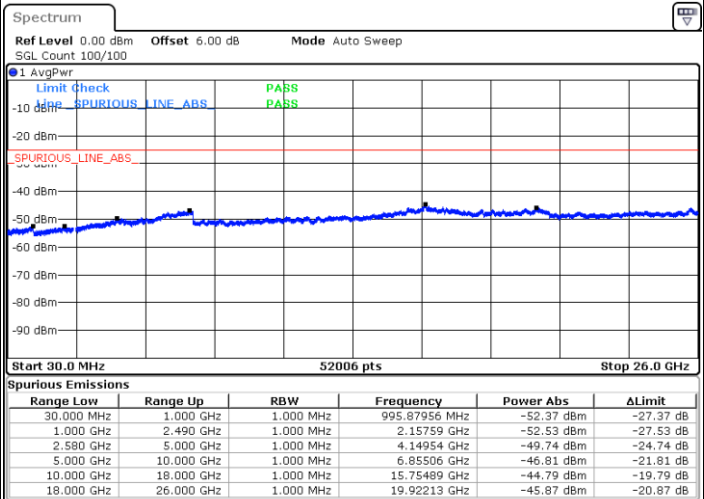
Date: 21 JUN 2019 14:22:46

Middle Channel / QPSK

Middle Channel / 16QAM



Date: 21 JUN 2019 14:24:35

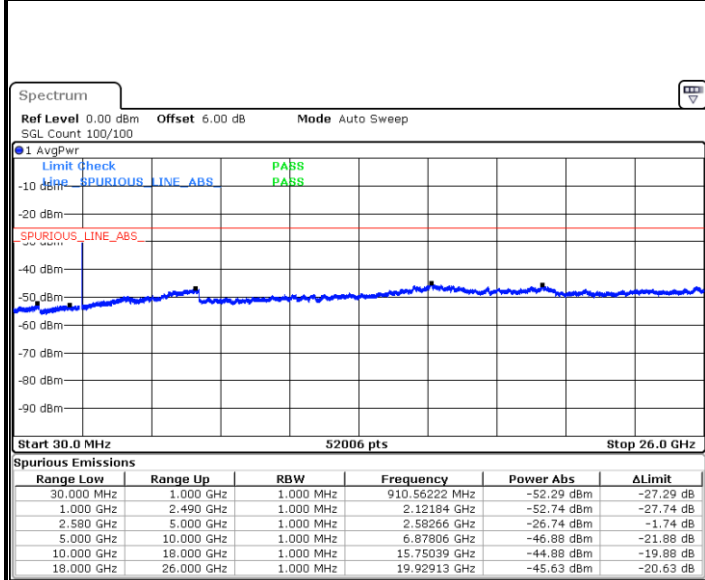


Date: 21 JUN 2019 14:23:41



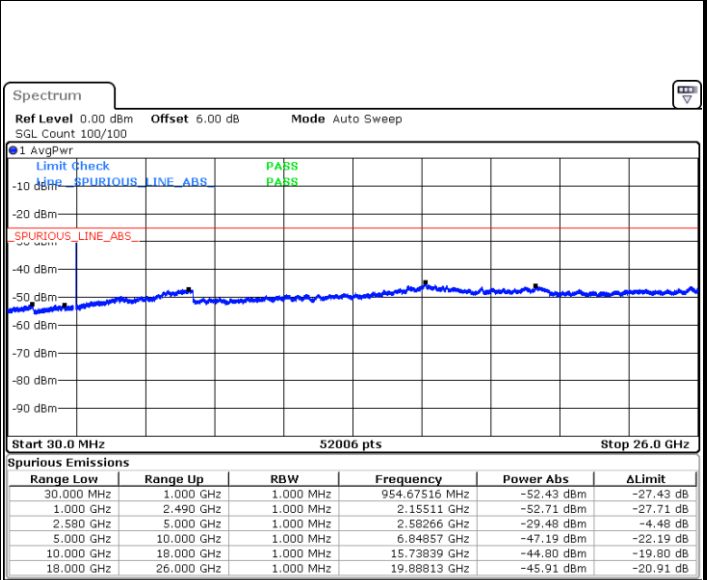
LTE Band7 / 15MHz

Highest Channel / QPSK



Date: 21 JUN 2019 14:25:29

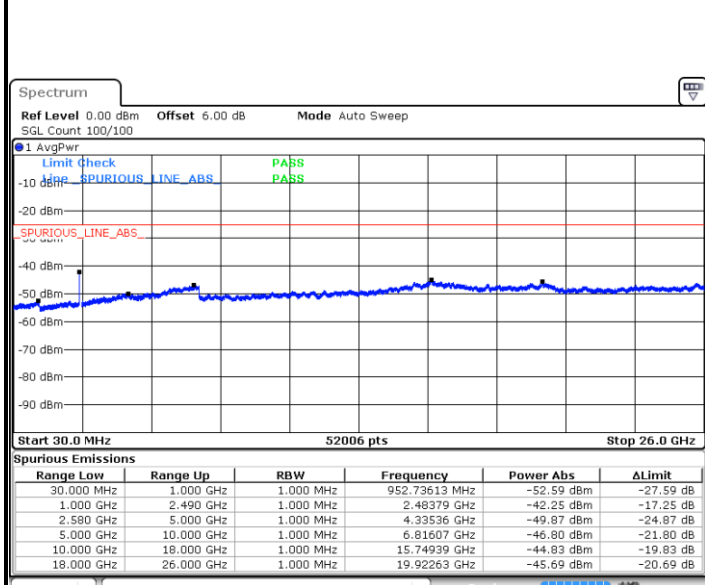
Highest Channel / 16QAM



Date: 21 JUN 2019 14:26:23

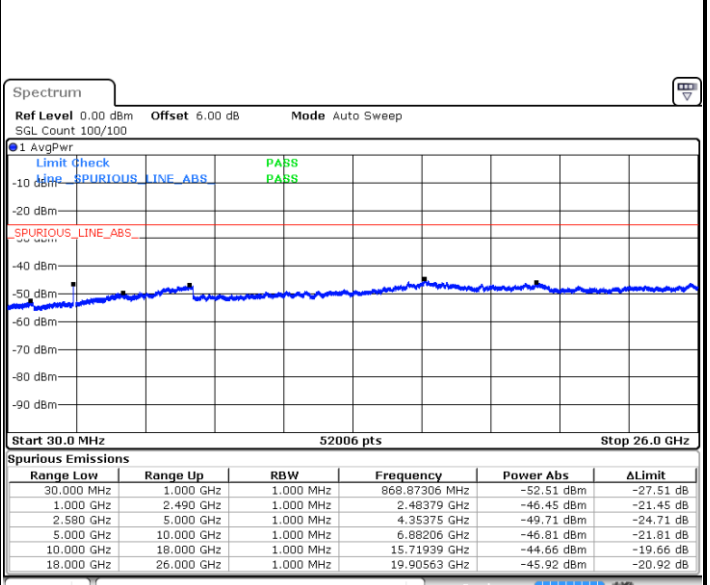
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 21 JUN 2019 14:38:24

Lowest Channel / 16QAM



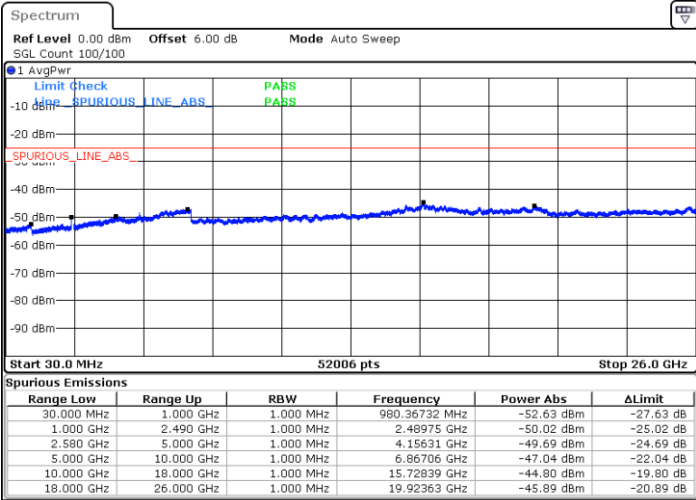
Date: 21 JUN 2019 14:39:18



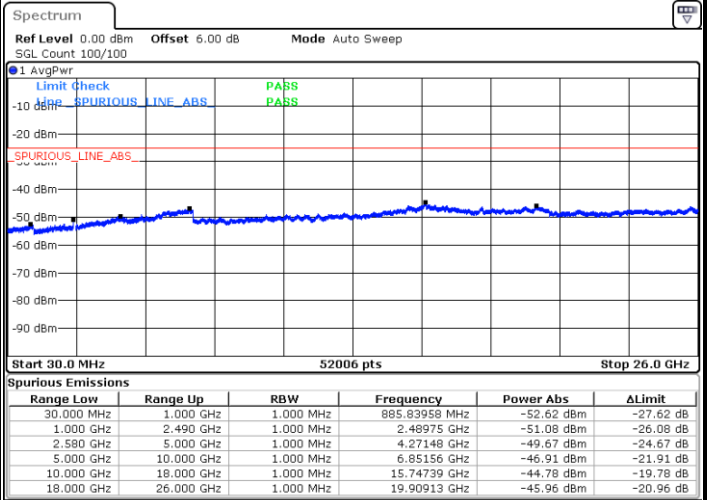
LTE Band 7 / 20MHz

Middle Channel / QPSK

Middle Channel / 16QAM



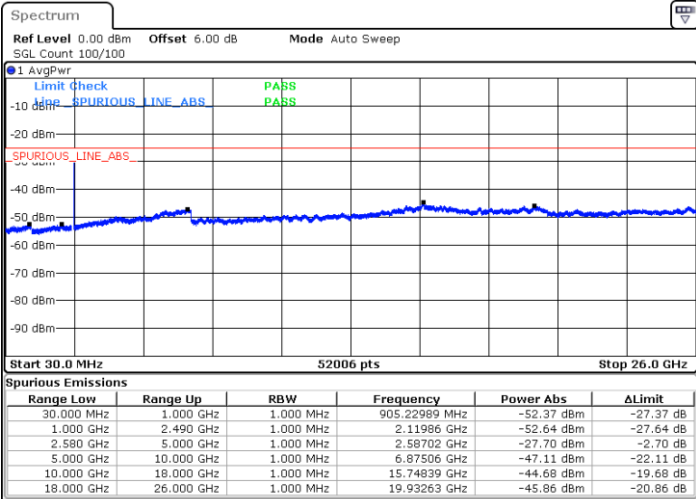
Date: 21 JUN 2019 14:41:06



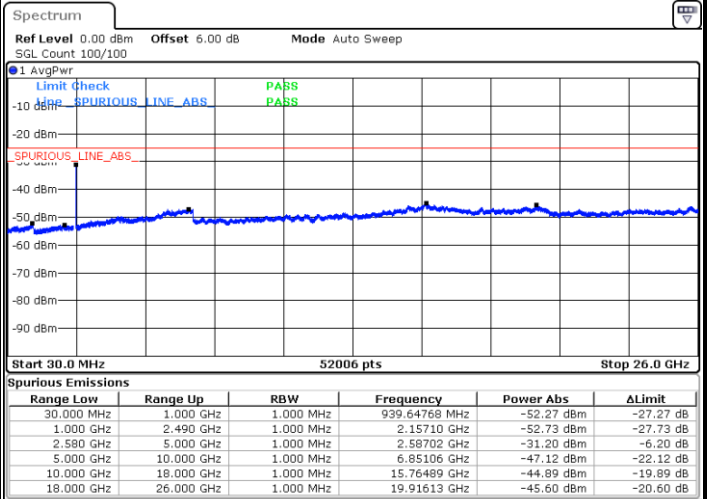
Date: 21 JUN 2019 14:40:12

Highest Channel / QPSK

Highest Channel / 16QAM



Date: 21 JUN 2019 14:42:00



Date: 21 JUN 2019 14:42:54



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	0.0001	PASS
40	Normal Voltage	0.0018	
30	Normal Voltage	0.0048	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0056	
0	Normal Voltage	0.0059	
-10	Normal Voltage	0.0052	
-20	Normal Voltage	0.0023	
-30	Normal Voltage	0.0010	
20	Maximum Voltage	0.0051	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

Note: Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.45 V. ; Maximum Voltage =4.2 V.



Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0025	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	0.0002	
-20	Normal Voltage	0.0004	
-30	Normal Voltage	0.0019	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0027	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.45 V. ; Maximum Voltage =4.2 V.
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 /16 QAM								
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	-57.79	-13	-44.79	-64.76	1.58	10.70	H
	2496	-59.86	-13	-46.86	-68.11	2.102	12.50	H
	3330	-63.88	-13	-50.88	-72.77	2.856	13.90	H
	4158	-60.80	-13	-47.80	-69.26	2.689	13.30	H
	4992	-55.12	-13	-42.12	-62.88	3.093	13.00	H
	5826	-56.03	-13	-43.03	-64.80	3.178	14.10	H
	1664	-51.20	-13	-38.20	-58.17	1.58	10.70	V
	2496	-58.91	-13	-45.91	-67.16	2.10	12.50	V
	3330	-62.19	-13	-49.19	-71.08	2.86	13.90	V
	4158	-58.99	-13	-45.99	-67.45	2.69	13.30	V
	4992	-52.97	-13	-39.97	-60.73	3.09	13.00	V
	5826	-56.07	-13	-43.07	-64.84	3.18	14.10	V

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

LTE Band 7 / 20MHz / QPSK/16 QAM								
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	-29.63	-25	-4.63	-39.84	3.03	13.24	H
	7580	-39.21	-25	-14.21	-48.66	3.56	13.01	H
	10100	-52.95	-25	-27.95	-62.47	3.92	13.44	H
	12630	-52.58	-25	-27.58	-62.50	4.44	14.36	H
	5052	-35.39	-25	-10.39	-45.60	3.03	13.24	V
	7580	-43.74	-25	-18.74	-53.19	3.56	13.01	V
	10100	-54.69	-25	-29.69	-64.21	3.92	13.44	V
	12630	-56.53	-25	-31.53	-66.45	4.44	14.36	V

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