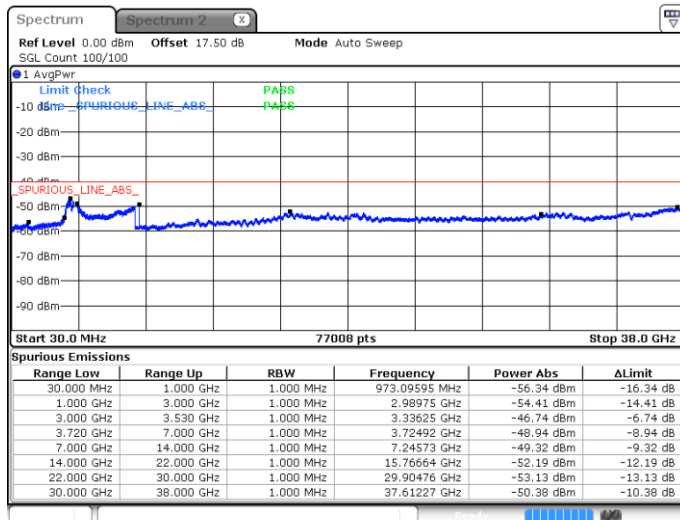




LTE Band 48 / 5MHz

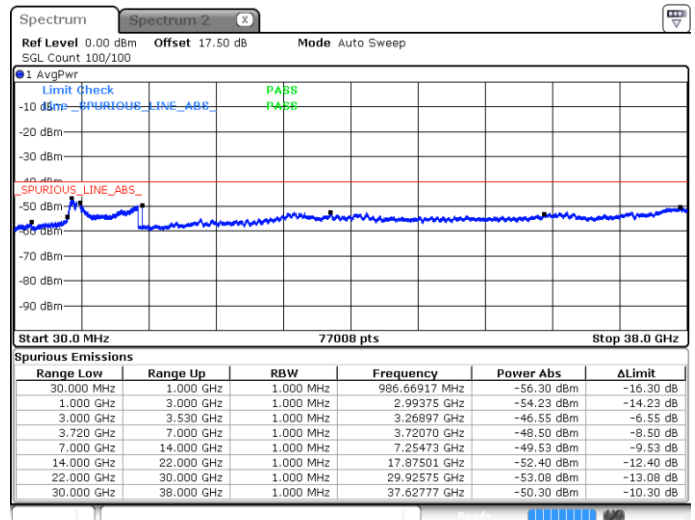
QPSK

Middle Channel / 1RB0



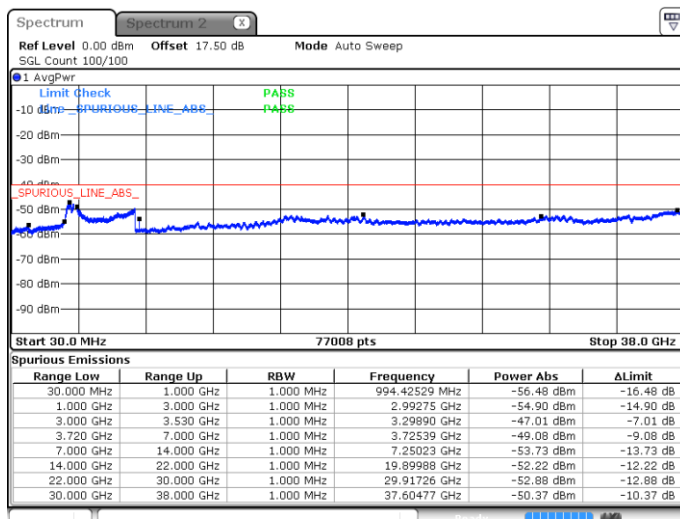
Date: 4 MAY 2020 01:13:31

Middle Channel / 1RBmax



Date: 4 MAY 2020 01:26:53

Middle Channel / FullRB



Date: 4 MAY 2020 01:20:12

N/A

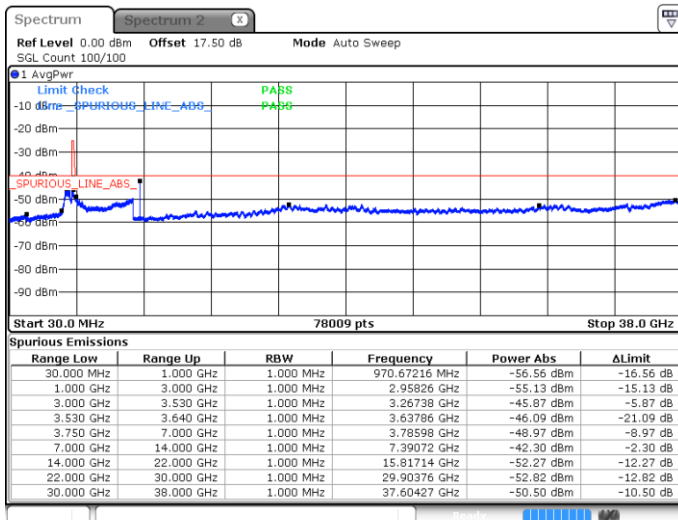


LTE Band 48 / 5MHz

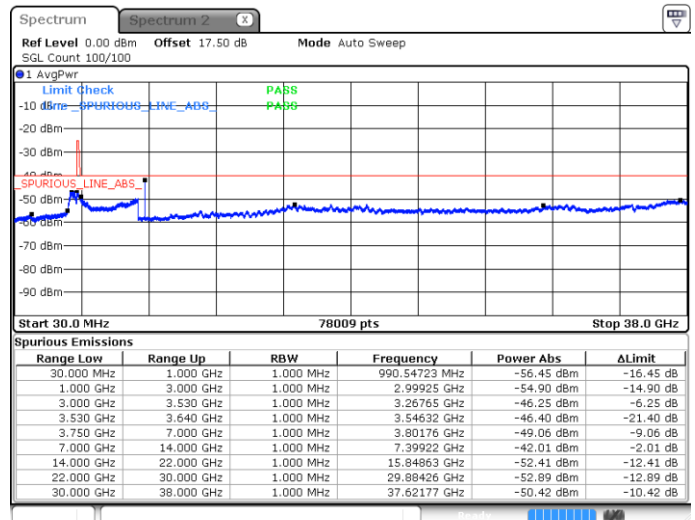
QPSK

Highest Channel / 1RB0

Highest Channel / 1RBmax



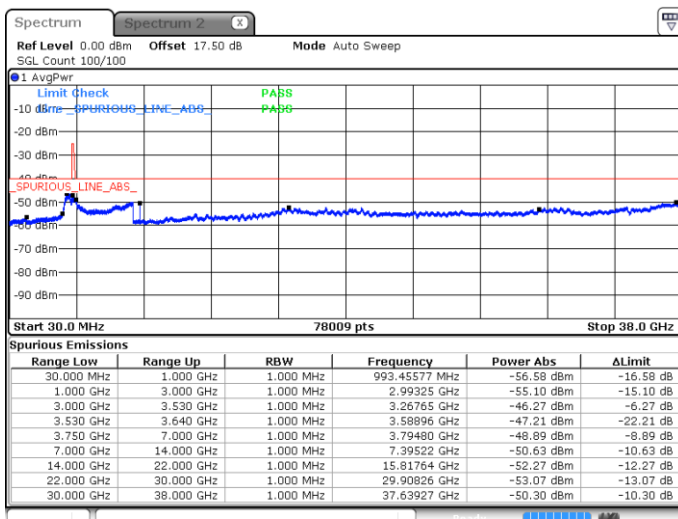
Date: 4 MAY 2020 01:14:38



Date: 4 MAY 2020 01:28:00

Highest Channel / FullIRB

N/A



Date: 4 MAY 2020 01:21:19

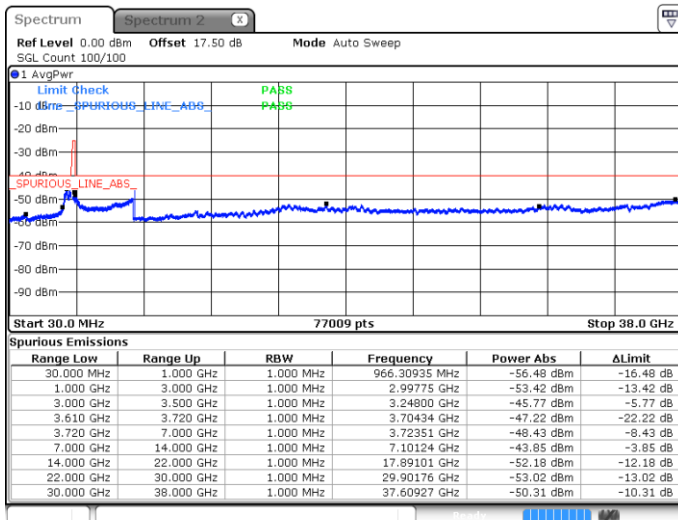


LTE Band 48 / 10MHz

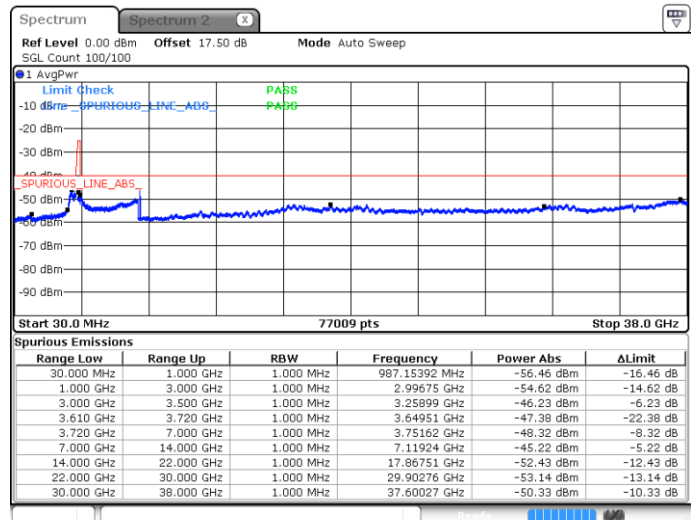
QPSK

Lowest Channel / 1RB0

Lowest Channel / 1RBmax



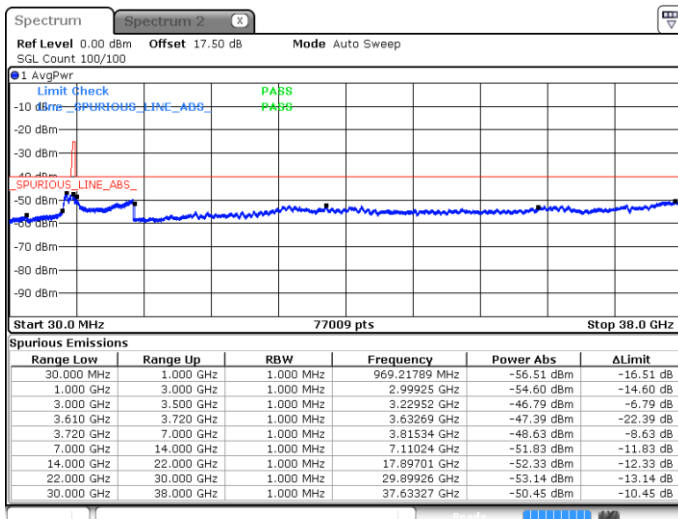
Date: 4 MAY 2020 01:31:24



Date: 4 MAY 2020 01:44:47

Lowest Channel / FullIRB

N/A



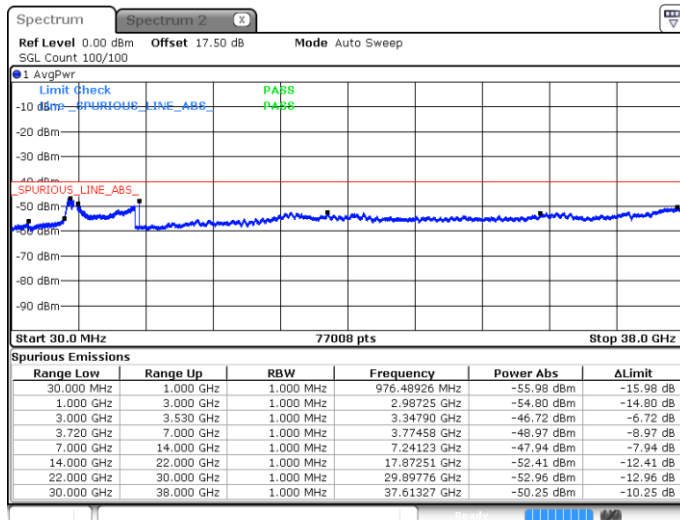
Date: 4 MAY 2020 01:38:05



LTE Band 48 / 10MHz

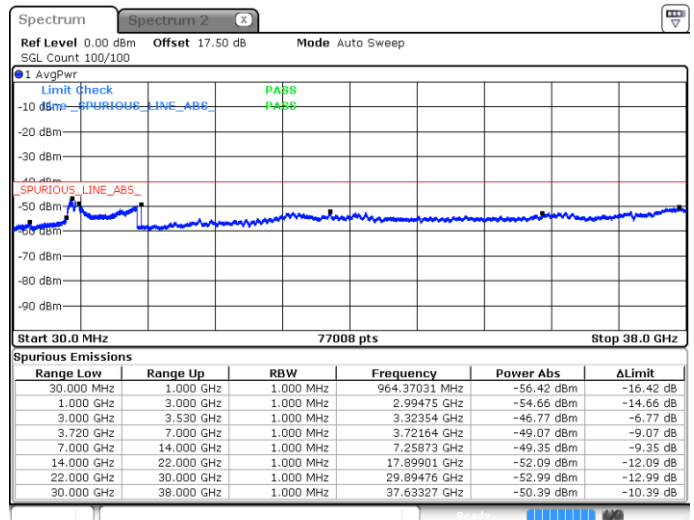
QPSK

MiddleChannel / 1RB0



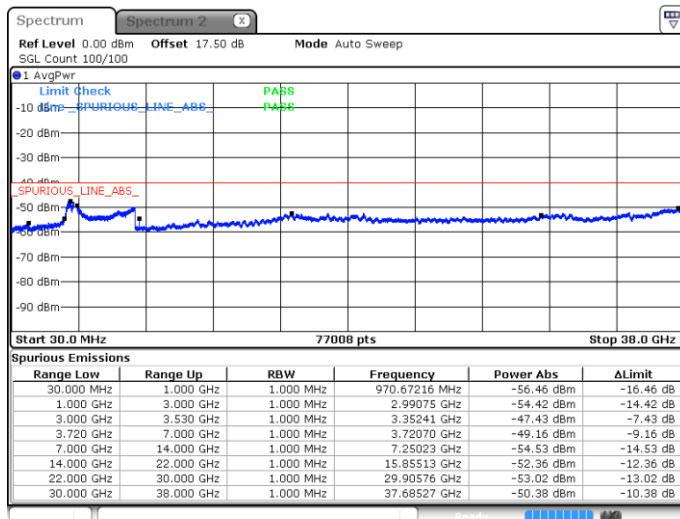
Date: 4 MAY 2020 01:32:30

Middle Channel / 1RBmax



Date: 4 MAY 2020 01:45:53

Middle Channel / FullRB



Date: 4 MAY 2020 01:39:12

N/A

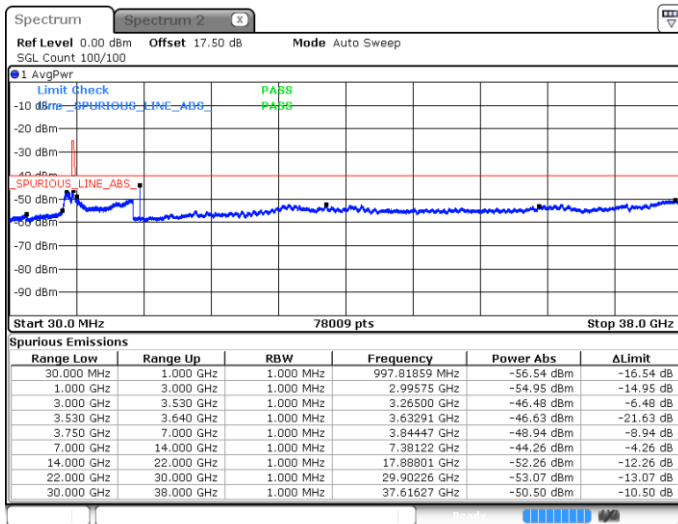


LTE Band 48 / 10MHz

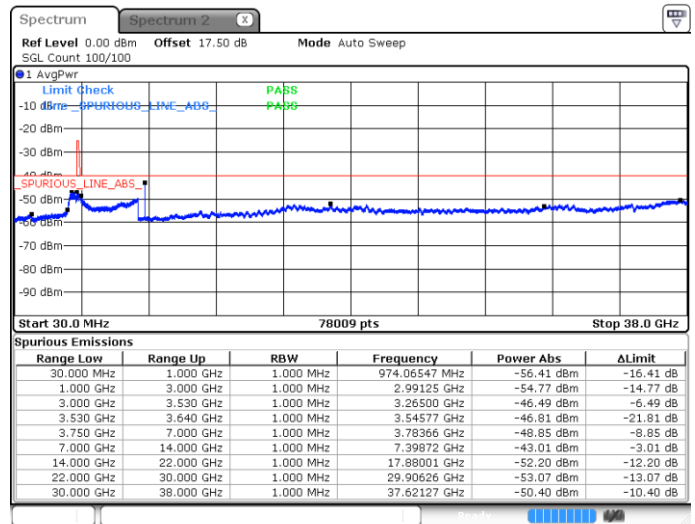
QPSK

Highest Channel / 1RB0

Highest Channel / 1RBmax



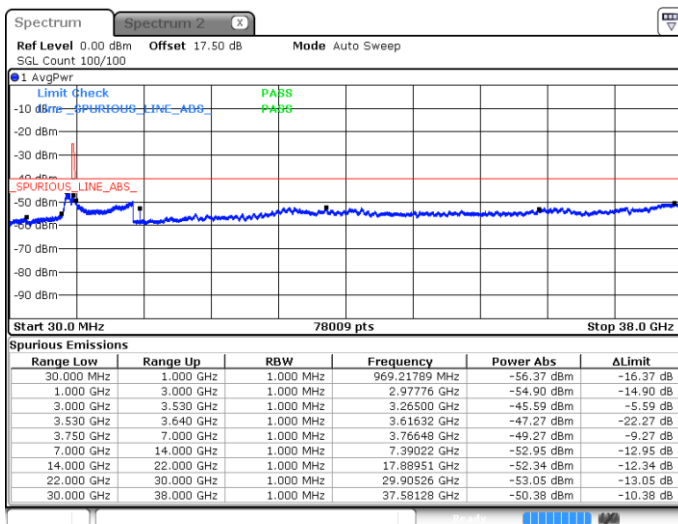
Date: 4 MAY 2020 01:35:51



Date: 4 MAY 2020 01:49:14

Highest Channel / FullIRB

N/A



Date: 4 MAY 2020 01:42:33

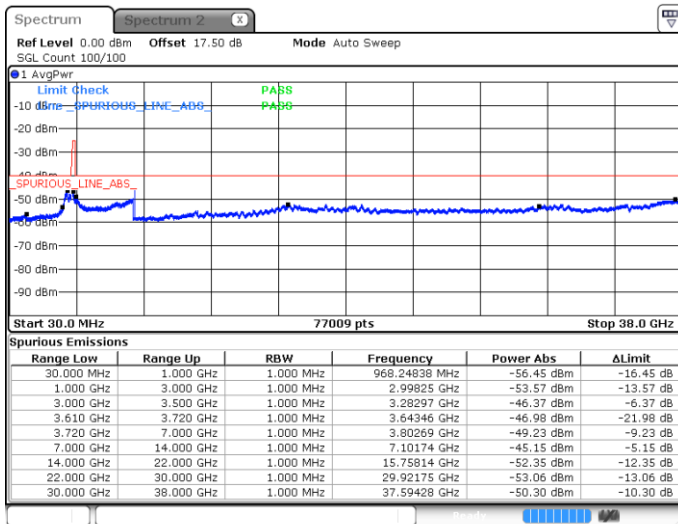


LTE Band 48 / 15MHz

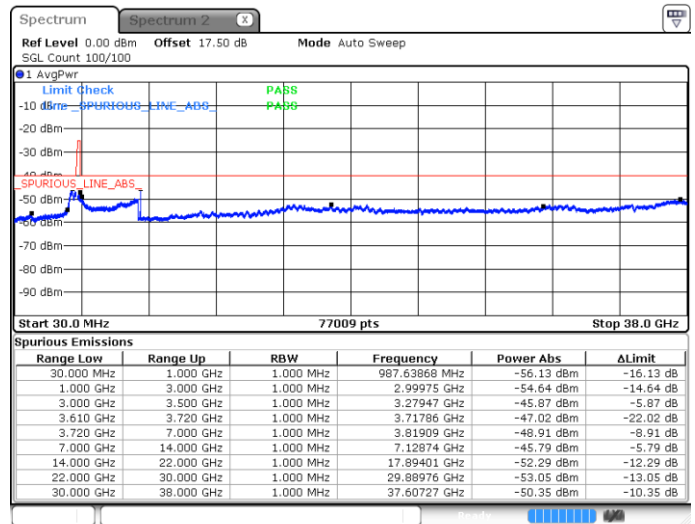
QPSK

Lowest Channel / 1RB0

Lowest Channel / 1RBmax



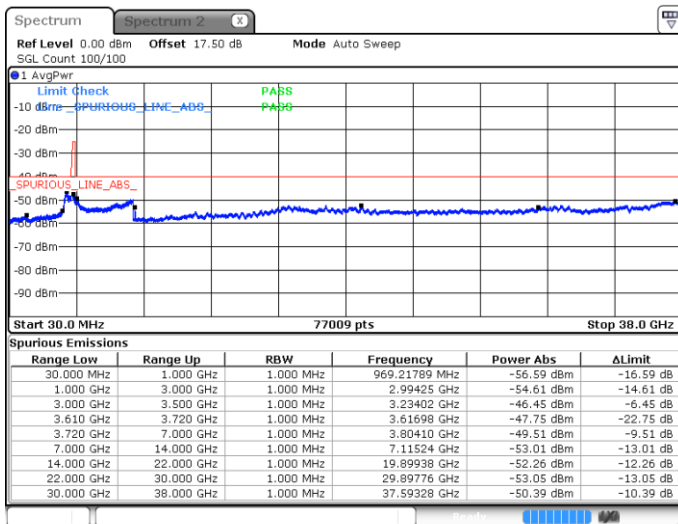
Date: 4 MAY 2020 01:50:23



Date: 4 MAY 2020 02:03:46

Lowest Channel / FullIRB

N/A



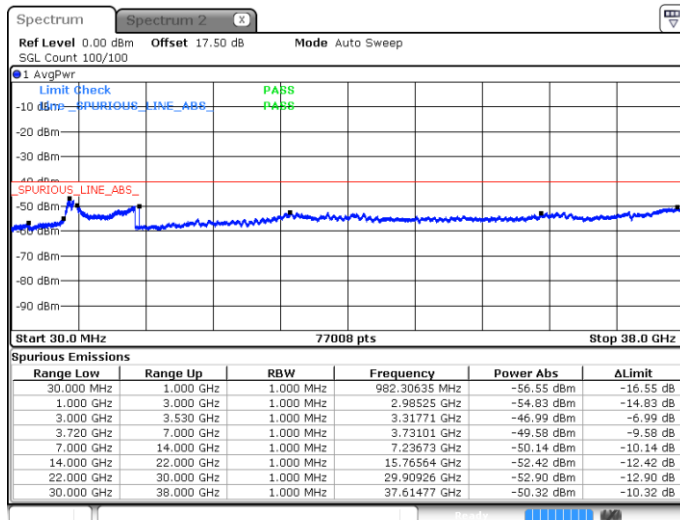
Date: 4 MAY 2020 01:57:04



LTE Band 48 / 15MHz

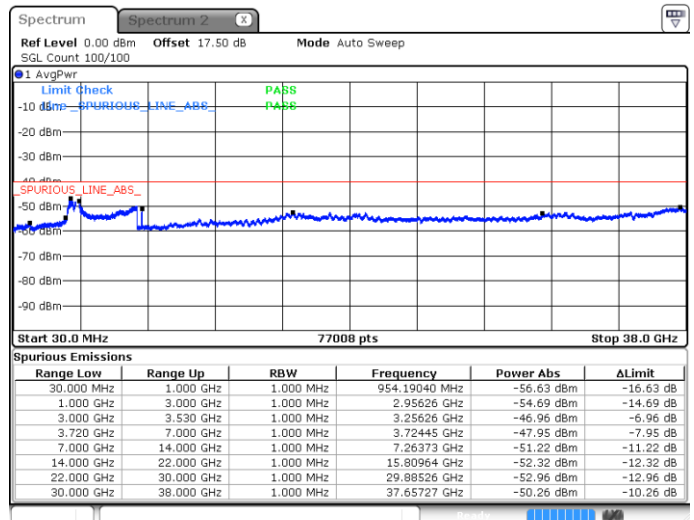
QPSK

Middle Channel / 1RB0



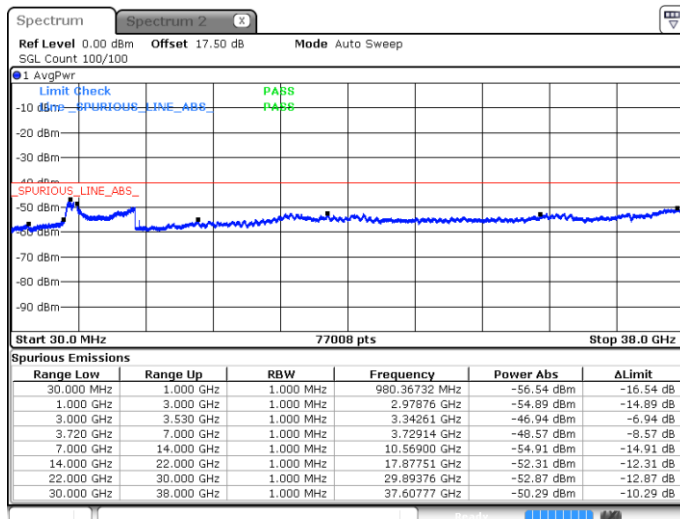
Date: 4 MAY 2020 01:53:43

Middle Channel / 1RBmax



Date: 4 MAY 2020 02:07:06

Middle Channel / FullRB



Date: 4 MAY 2020 02:00:24

N/A

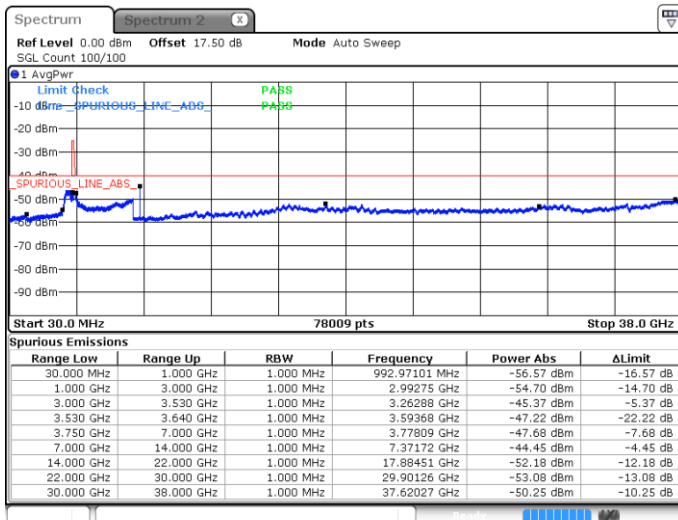


LTE Band 48 / 15MHz

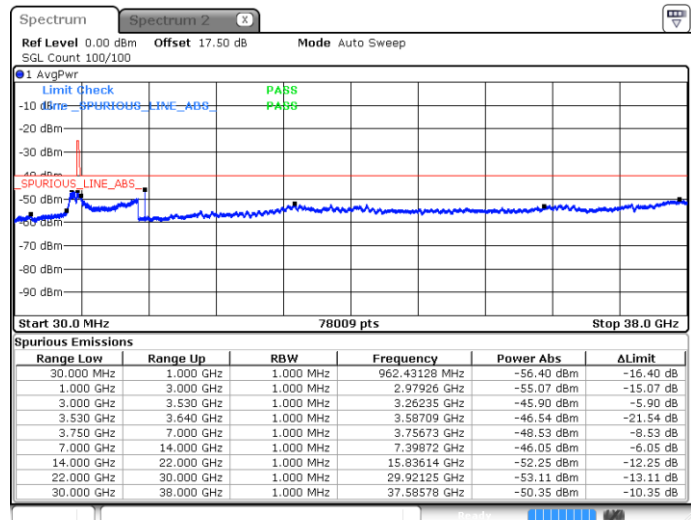
QPSK

Highest Channel / 1RB0

Highest Channel / 1RBmax



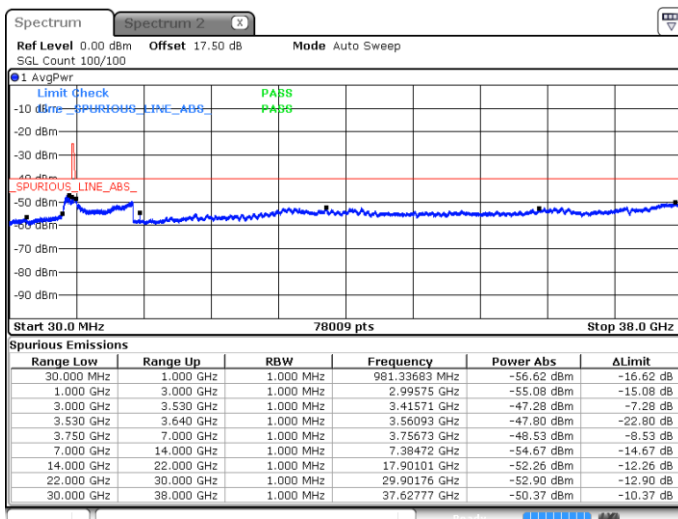
Date: 4 MAY 2020 01:54:50



Date: 4 MAY 2020 02:08:13

Highest Channel / FullIRB

N/A



Date: 4 MAY 2020 02:01:31

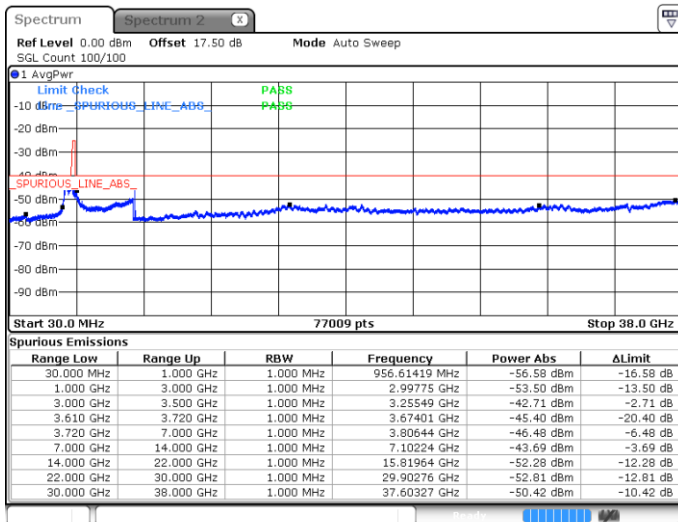


LTE Band 48 / 20MHz

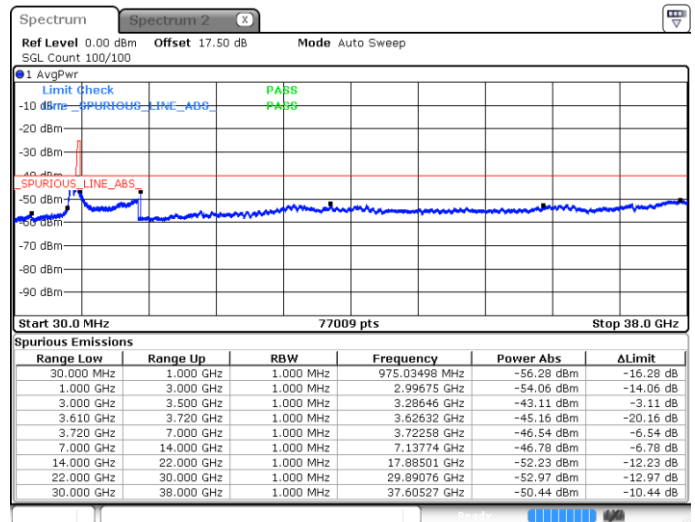
QPSK

Lowest Channel / 1RB0

Lowest Channel / 1RBmax



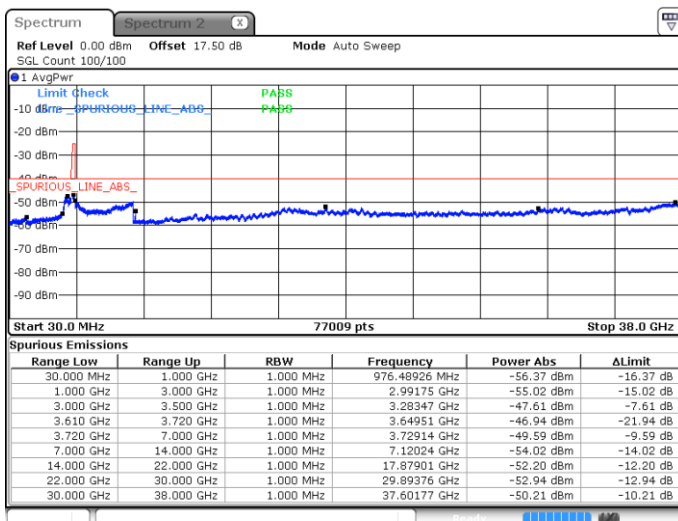
Date: 4 MAY 2020 02:18:17



Date: 4 MAY 2020 02:22:46

Lowest Channel / FullRB

N/A



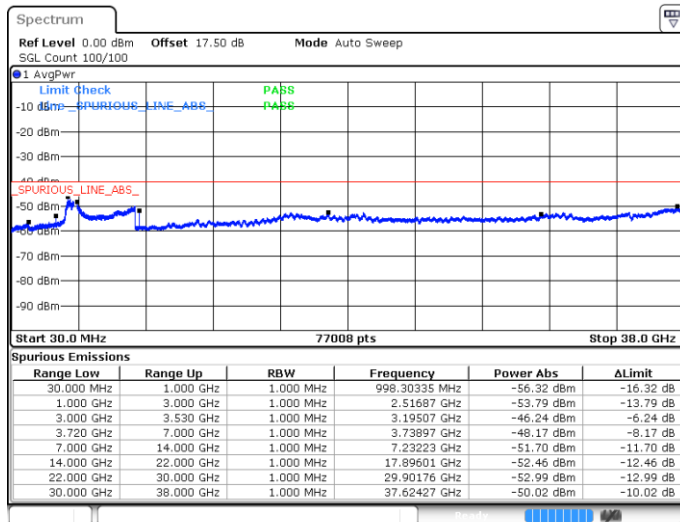
Date: 4 MAY 2020 02:11:36



LTE Band 48 / 20MHz

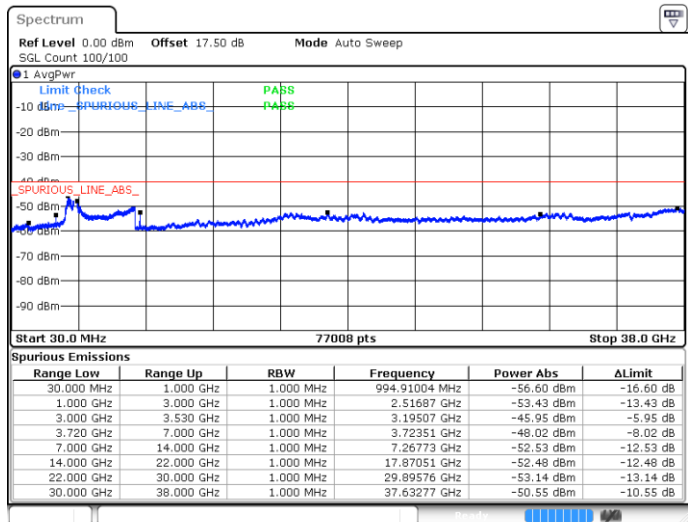
QPSK

Middle Channel / 1RB0



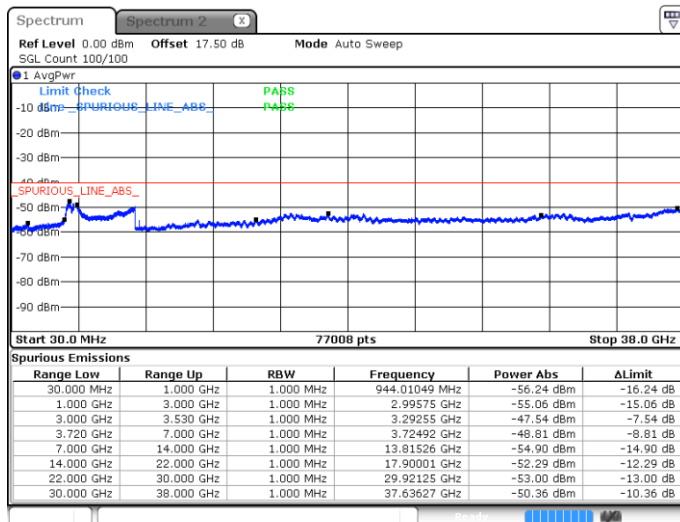
Date: 30 APR 2020 00:56:20

Middle Channel / 1RBmax



Date: 30 APR 2020 01:00:47

Middle Channel / FullRB



Date: 4 MAY 2020 02:12:42

N/A

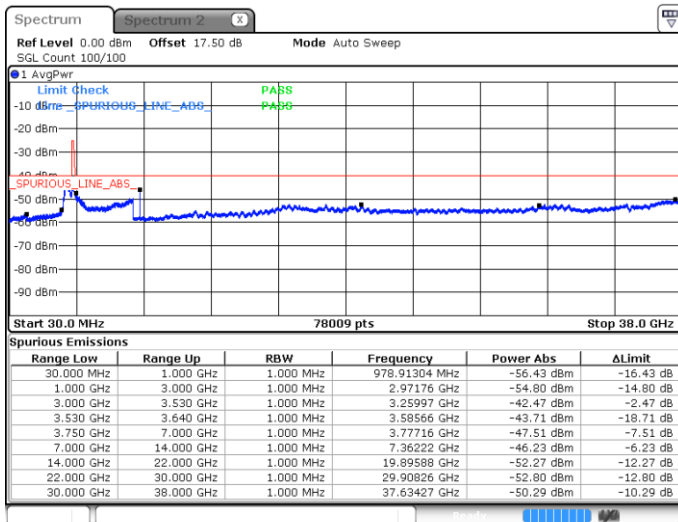


LTE Band 48 / 20MHz

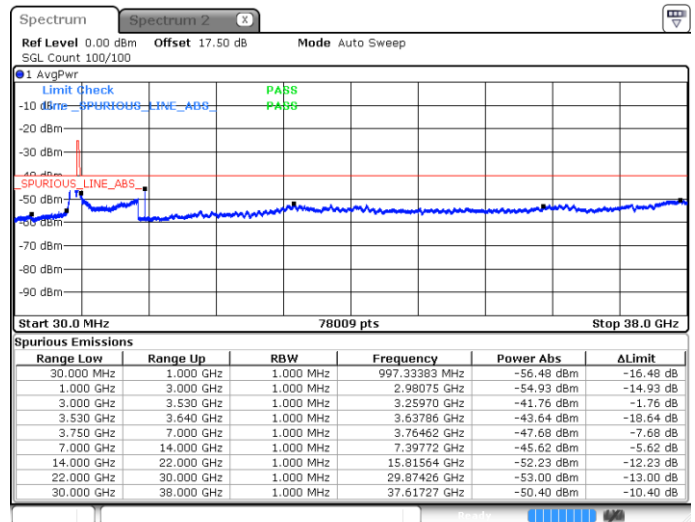
QPSK

Highest Channel / 1RB0

Highest Channel / 1RBmax



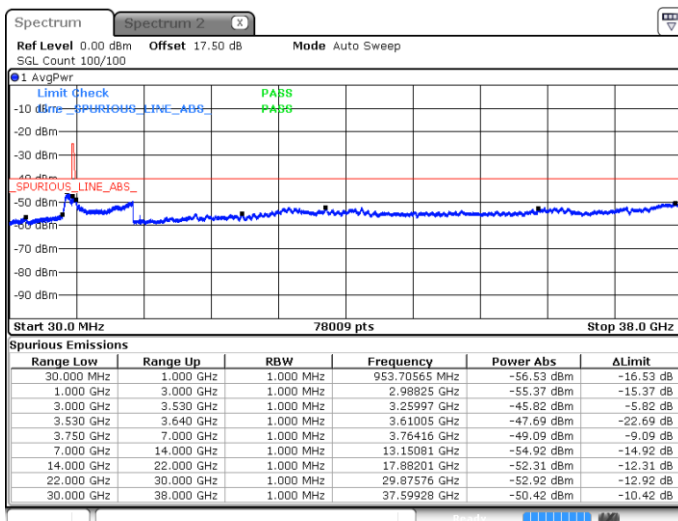
Date: 4 MAY 2020 02:20:32



Date: 4 MAY 2020 02:25:01

Highest Channel / FullIRB

N/A



Date: 4 MAY 2020 02:16:03

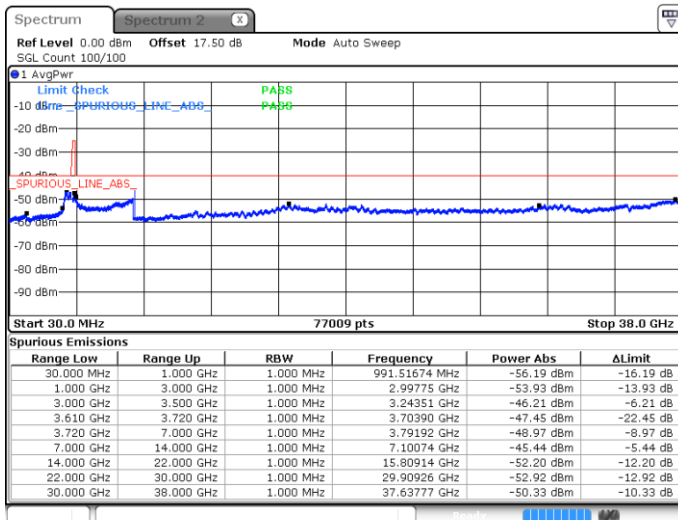


LTE Band 48 / 5MHz

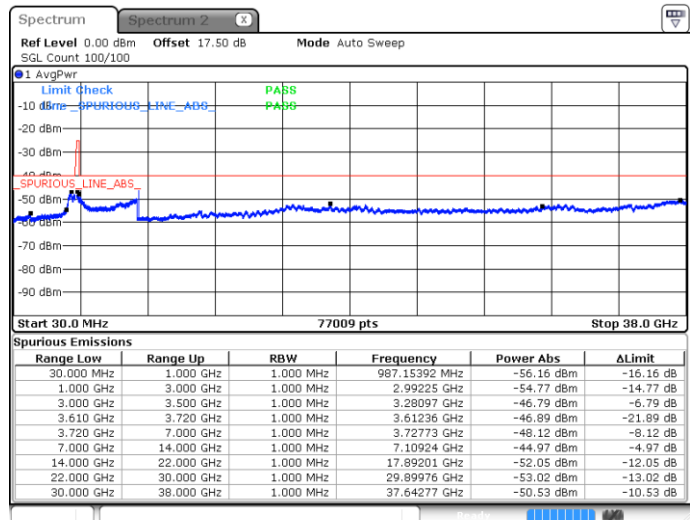
16QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax



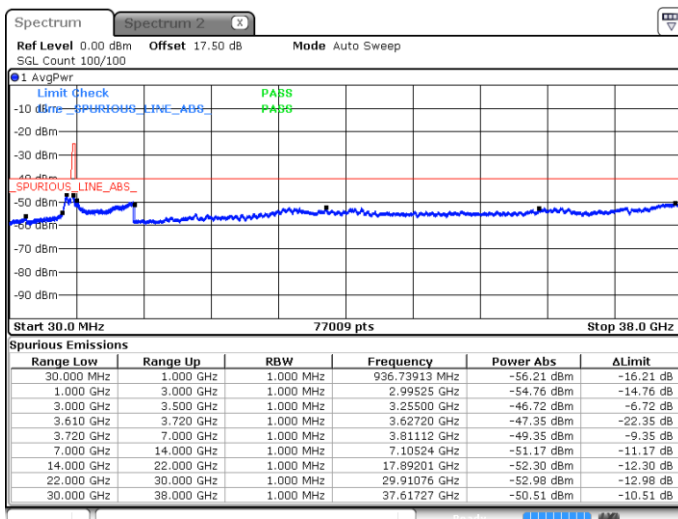
Date: 4 MAY 2020 01:11:18



Date: 4 MAY 2020 01:24:40

Lowest Channel / FullIRB

N/A



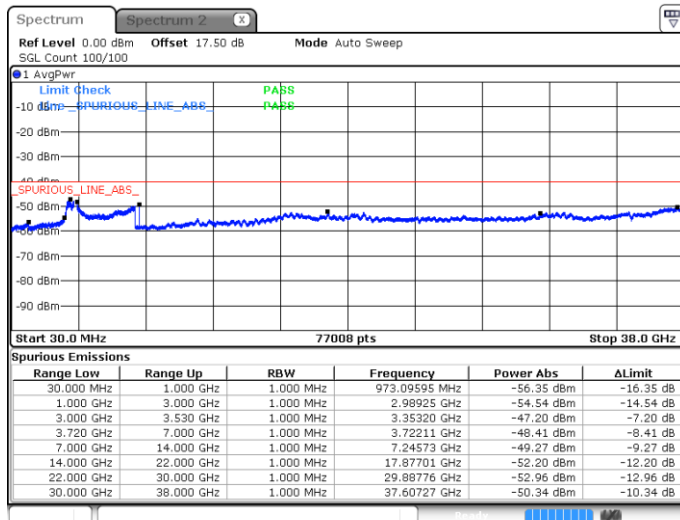
Date: 4 MAY 2020 01:17:59



LTE Band 48 / 5MHz

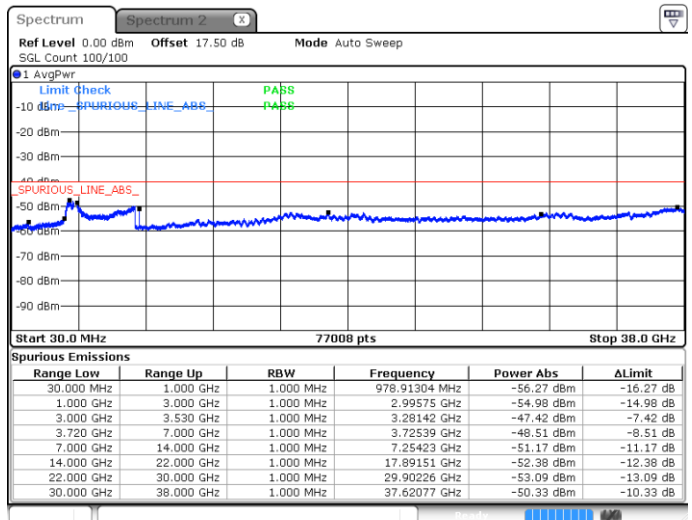
16QAM

Middle Channel / 1RB0



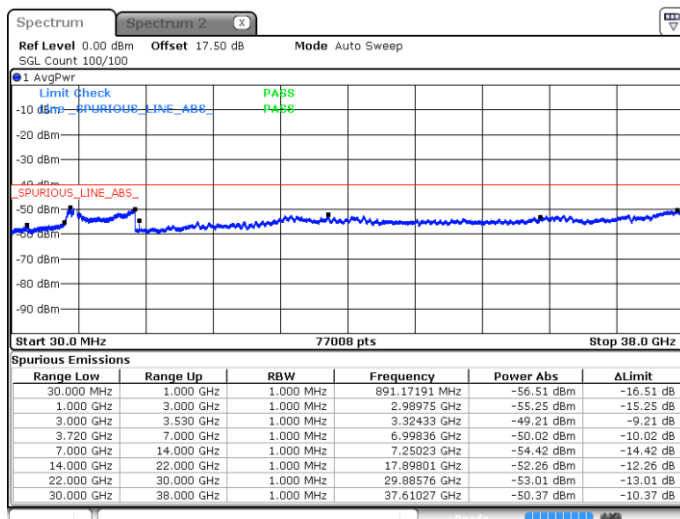
Date: 4 MAY 2020 01:12:24

Middle Channel / 1RBmax



Date: 4 MAY 2020 01:25:47

Middle Channel / FullRB



Date: 4 MAY 2020 01:19:06

N/A

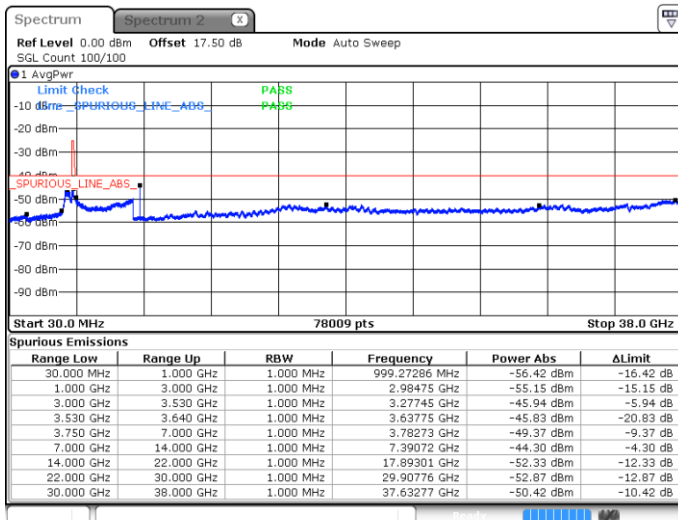


LTE Band 48 / 5MHz

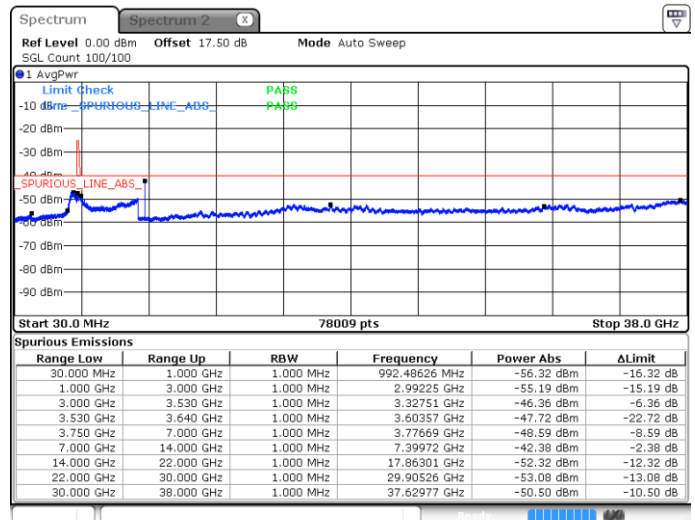
16QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



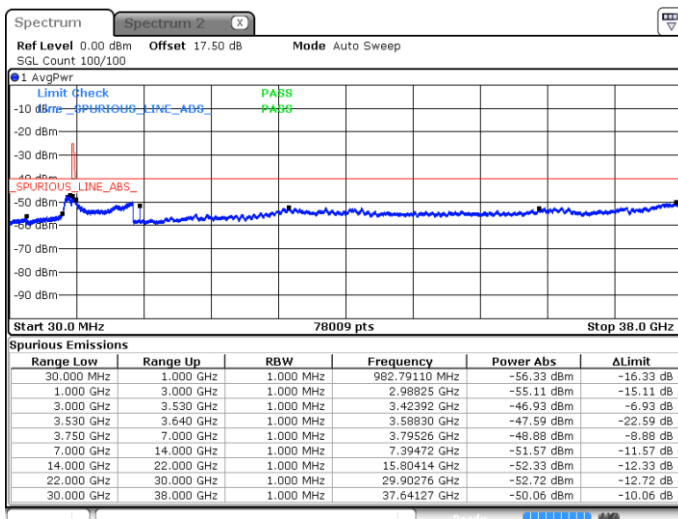
Date: 4 MAY 2020 01:15:45



Date: 4 MAY 2020 01:29:08

Highest Channel / FullIRB

N/A



Date: 4 MAY 2020 01:22:26

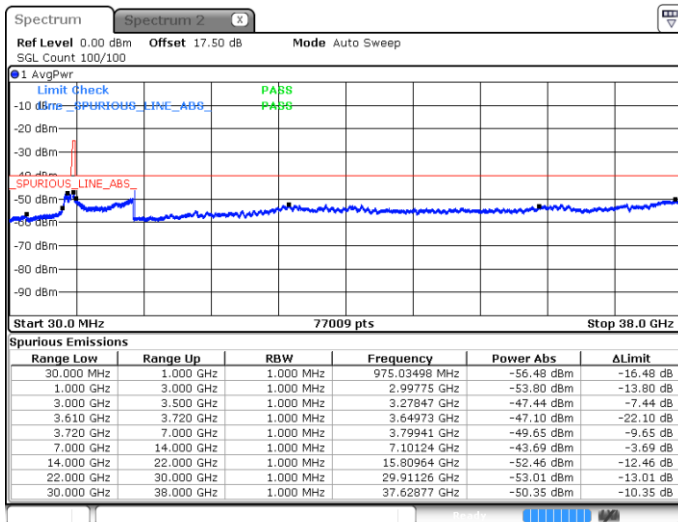


LTE Band 48 / 10MHz

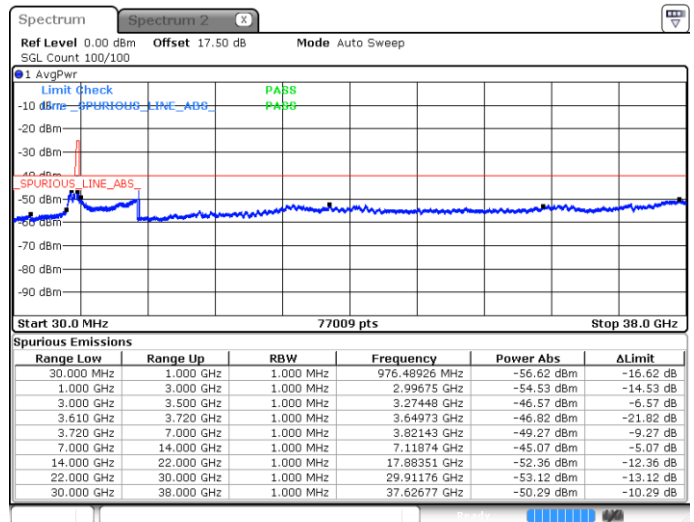
16QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax



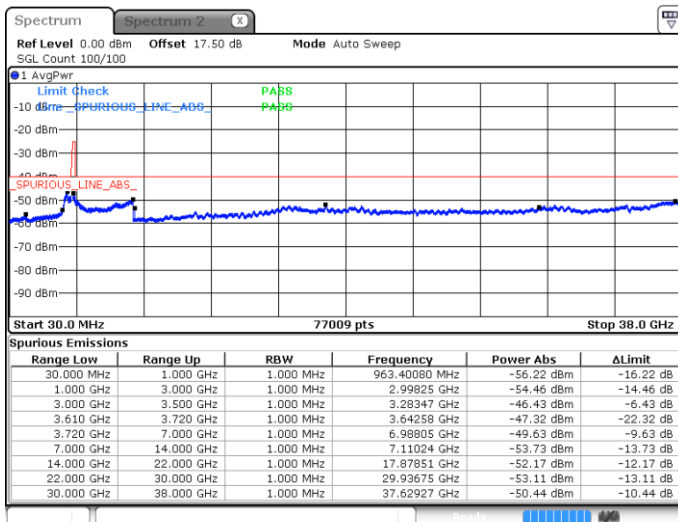
Date: 4 MAY 2020 01:30:17



Date: 4 MAY 2020 01:43:40

Lowest Channel / FullIRB

N/A



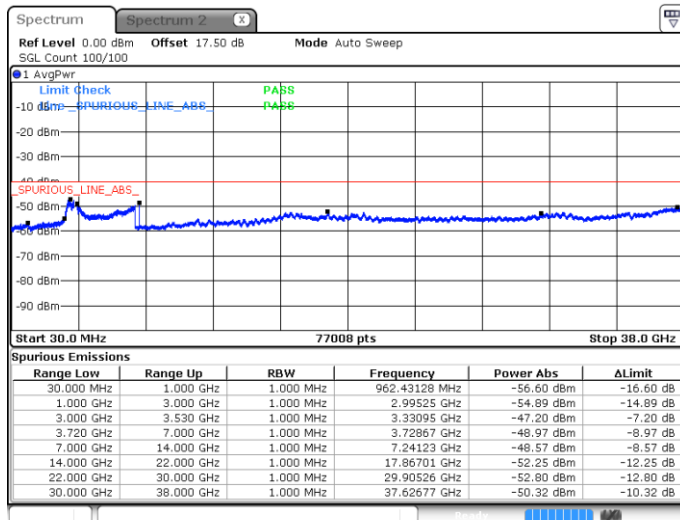
Date: 4 MAY 2020 01:36:58



LTE Band 48 / 10MHz

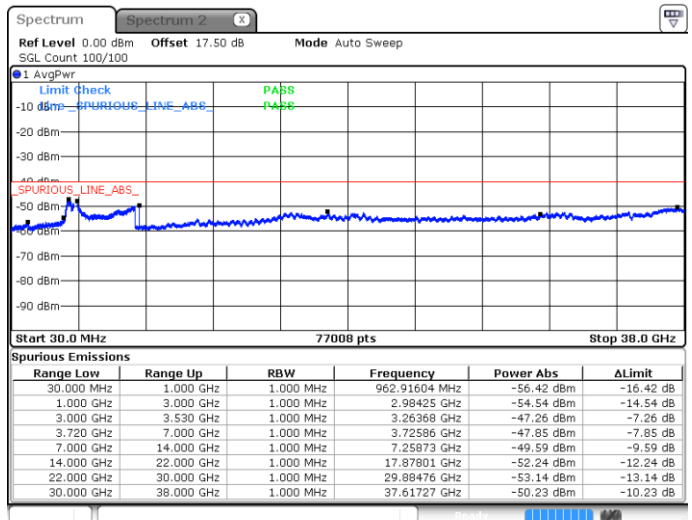
16QAM

MiddleChannel / 1RB0



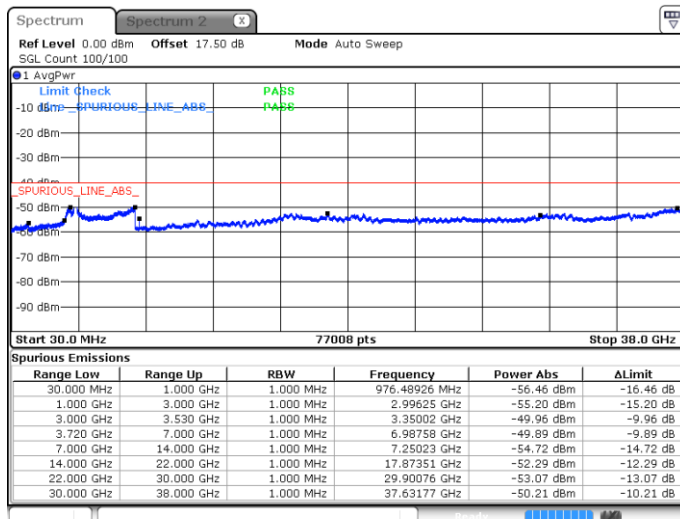
Date: 4 MAY 2020 01:33:37

Middle Channel / 1RBmax



Date: 4 MAY 2020 01:47:00

Middle Channel / FullRB



Date: 4 MAY 2020 01:40:18

N/A

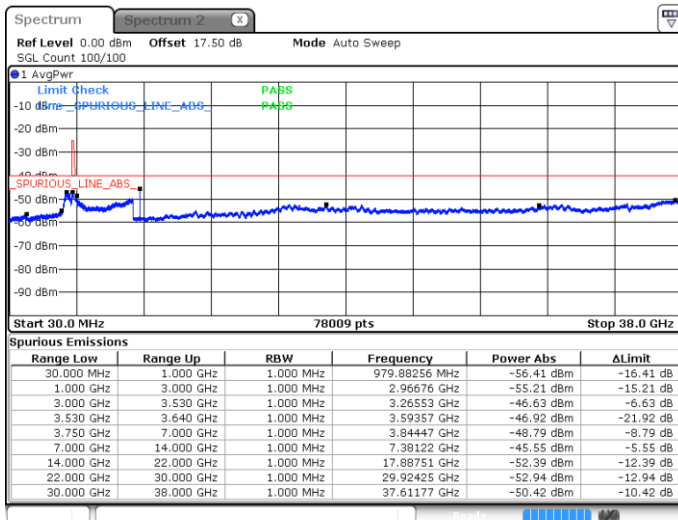


LTE Band 48 / 10MHz

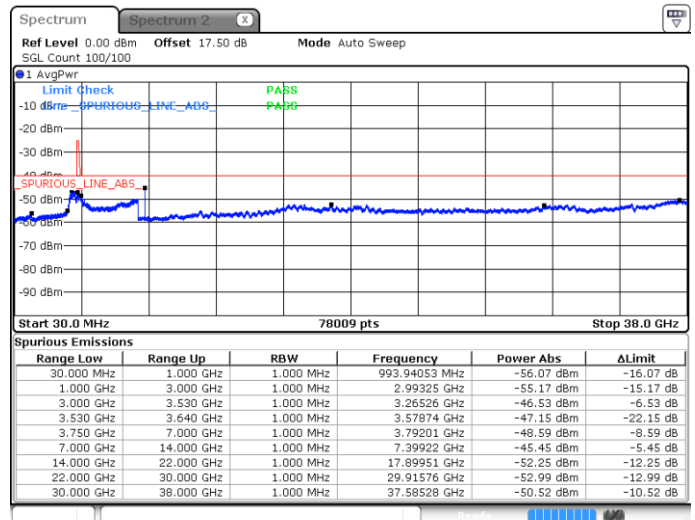
16QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



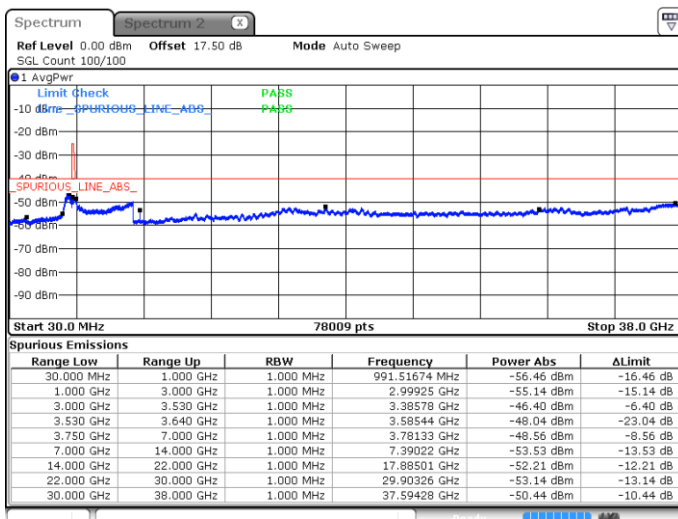
Date: 4 MAY 2020 01:34:44



Date: 4 MAY 2020 01:48:07

Highest Channel / FullIRB

N/A



Date: 4 MAY 2020 01:41:25

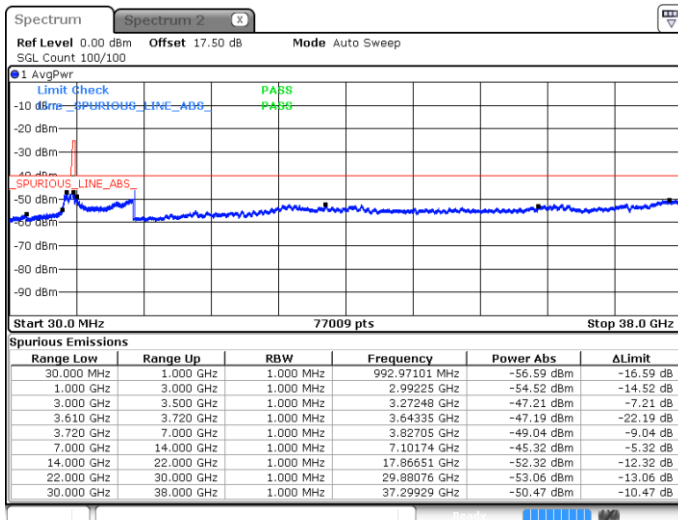


LTE Band 48 / 15MHz

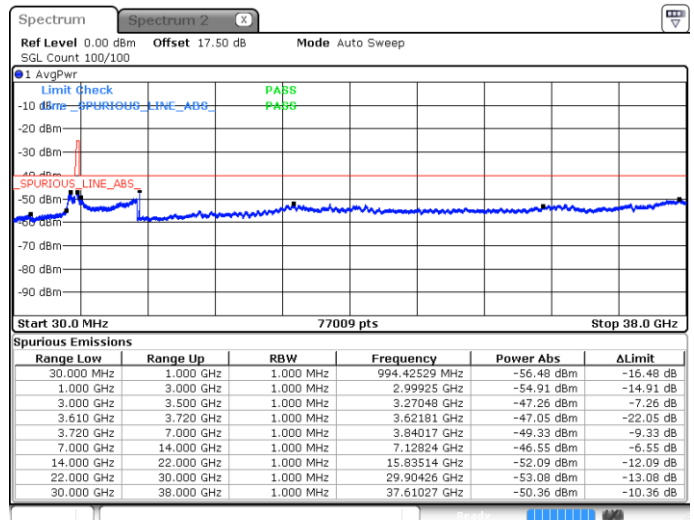
16QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax



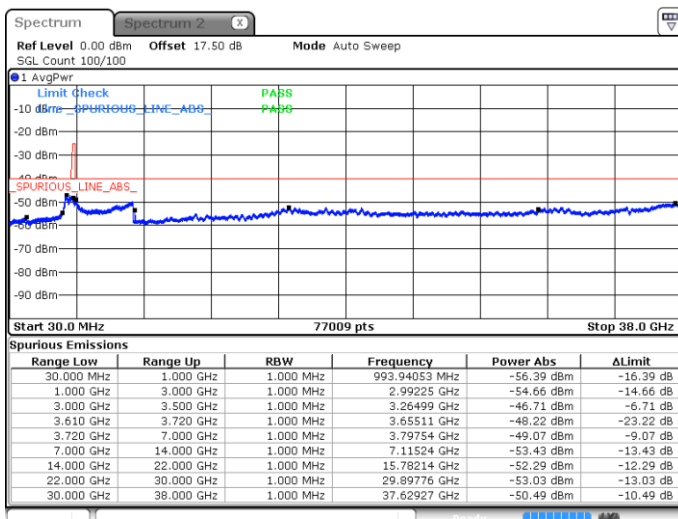
Date: 4 MAY 2020 01:51:30



Date: 4 MAY 2020 02:04:53

Lowest Channel / FullIRB

N/A



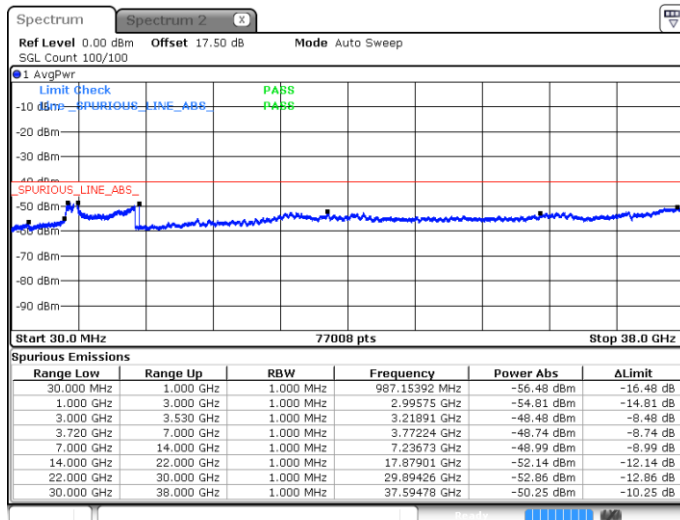
Date: 4 MAY 2020 01:58:11



LTE Band 48 / 15MHz

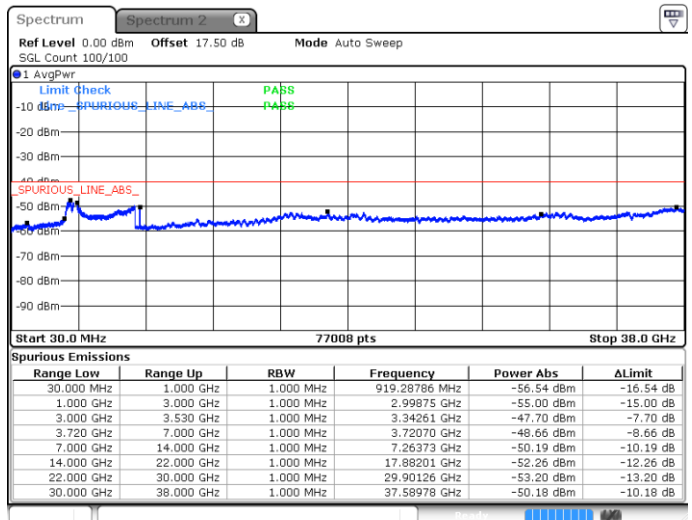
16QAM

Middle Channel / 1RB0



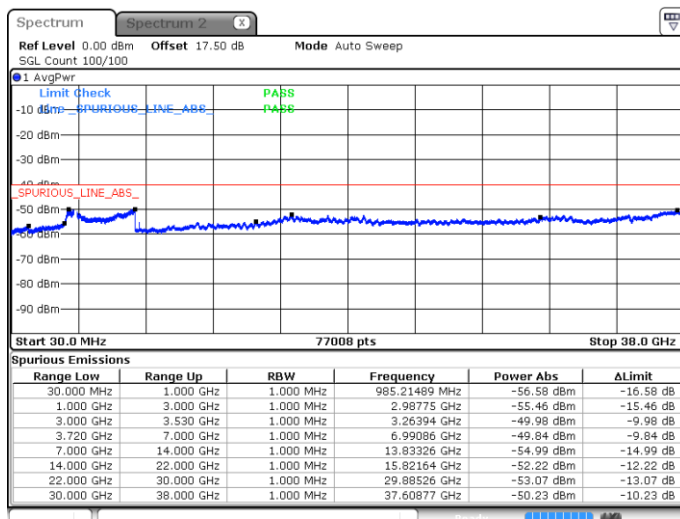
Date: 4 MAY 2020 01:52:36

Middle Channel / 1RBmax



Date: 4 MAY 2020 02:05:59

Middle Channel / FullRB



Date: 4 MAY 2020 01:59:18

N/A

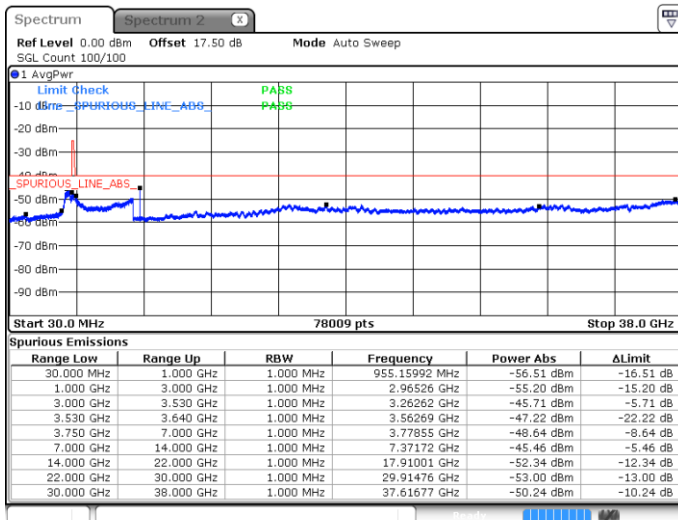


LTE Band 48 / 15MHz

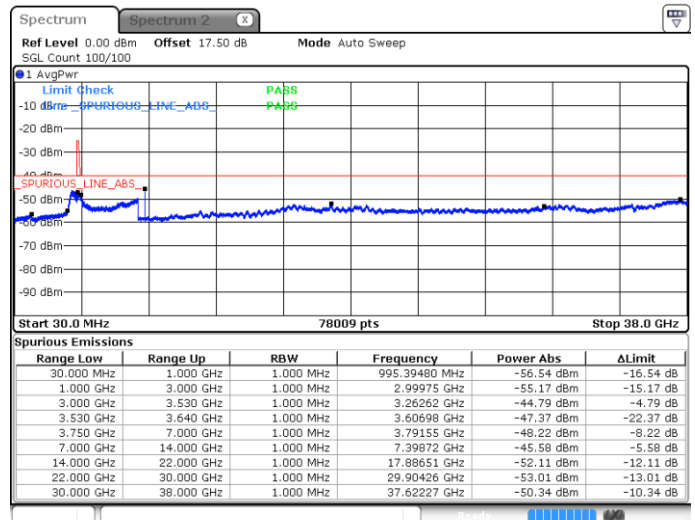
16QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



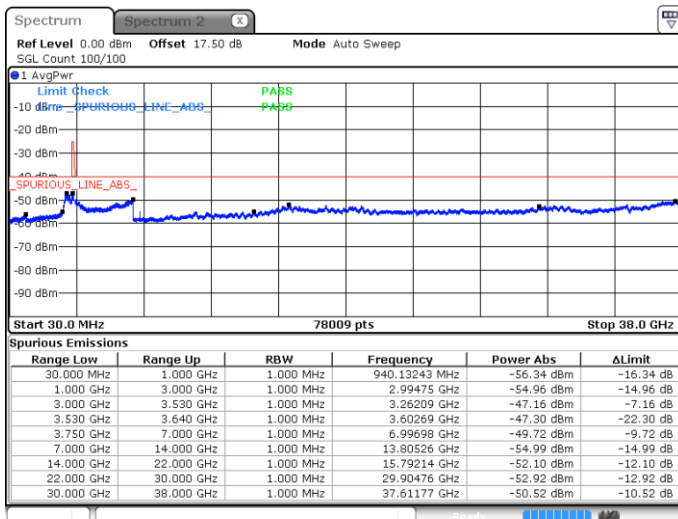
Date: 4 MAY 2020 01:55:57



Date: 4 MAY 2020 02:09:20

Highest Channel / FullIRB

N/A



Date: 4 MAY 2020 02:02:39

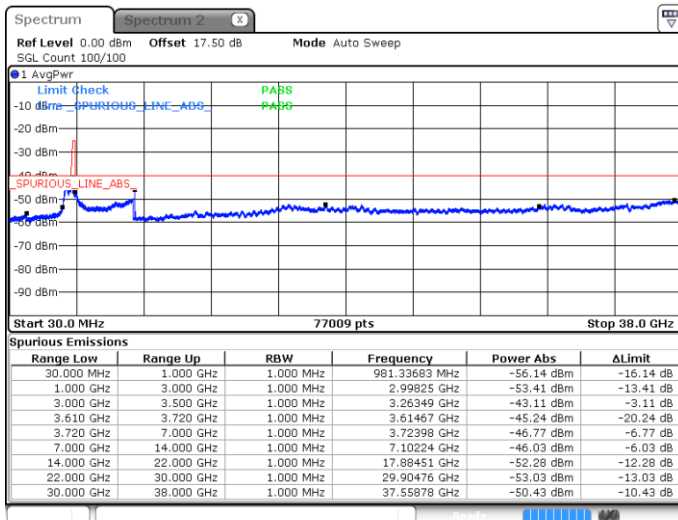


LTE Band 48 / 20MHz

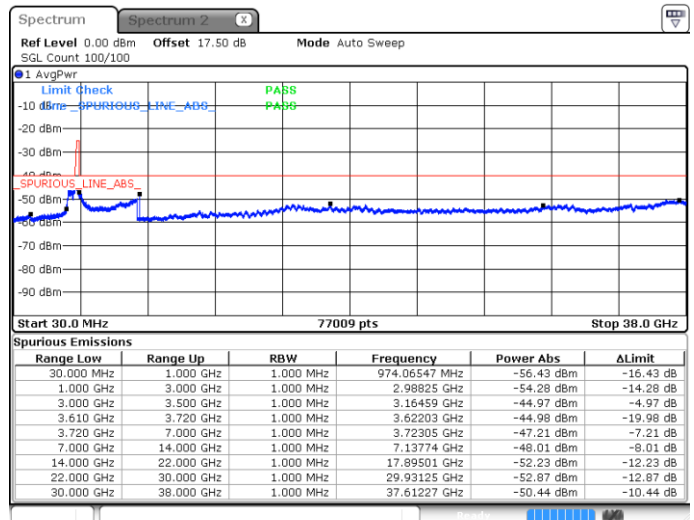
16QAM

Lowest Channel / 1RB0

Lowest Channel / 1RBmax



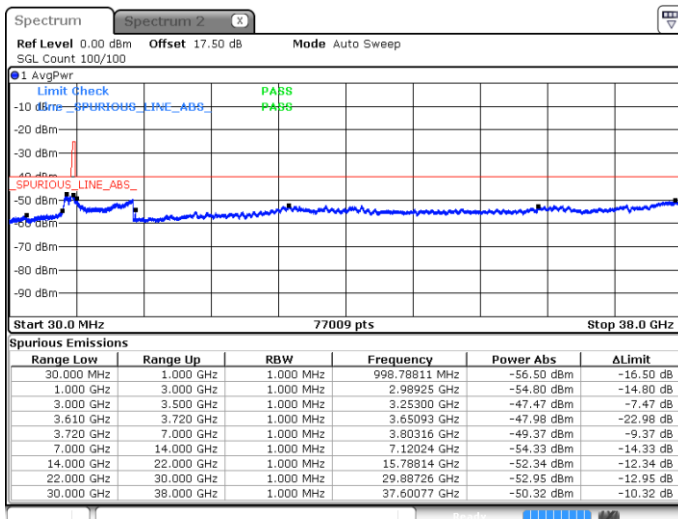
Date: 4 MAY 2020 02:17:10



Date: 4 MAY 2020 02:21:39

Lowest Channel / FullIRB

N/A



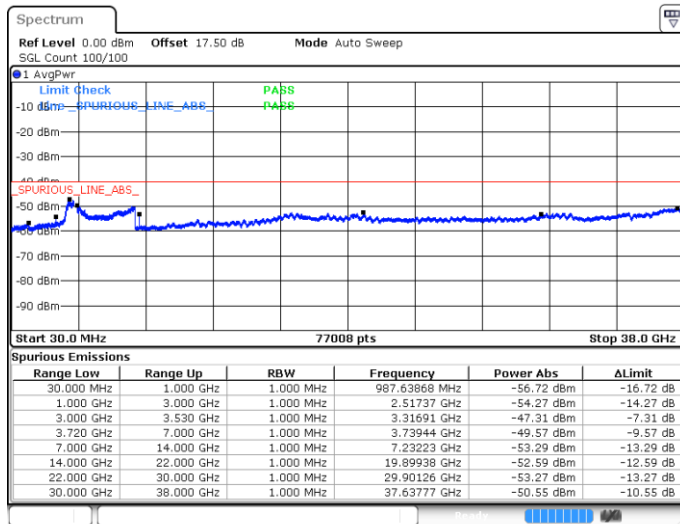
Date: 4 MAY 2020 02:10:28



LTE Band 48 / 20MHz

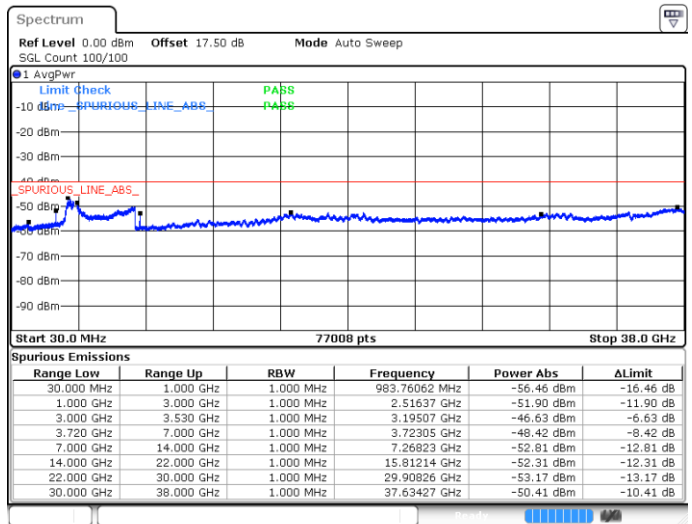
16QAM

Middle Channel / 1RB0



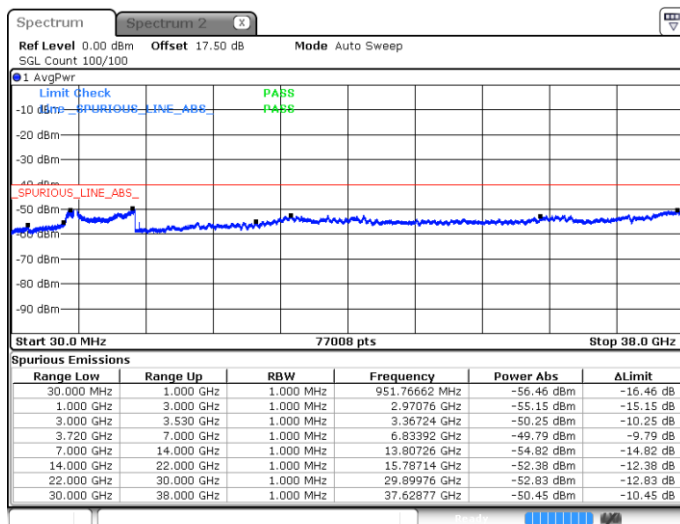
Date: 30 APR 2020 00:57:55

Middle Channel / 1RBmax



Date: 30 APR 2020 00:59:18

Middle Channel / FullRB



Date: 4 MAY 2020 02:13:48

N/A

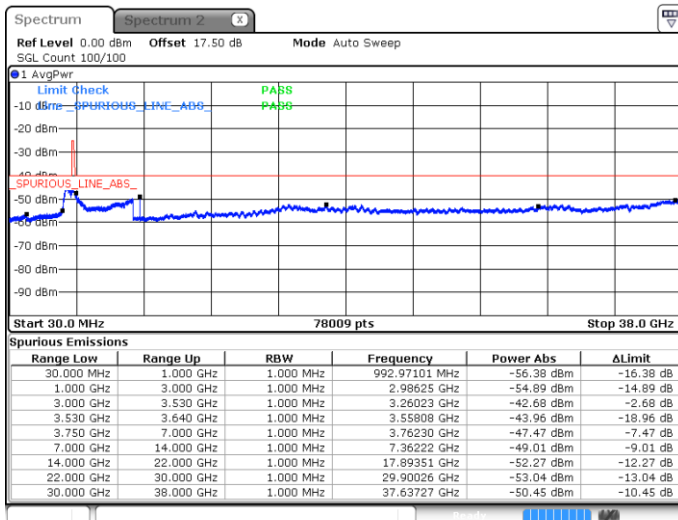


LTE Band 48 / 20MHz

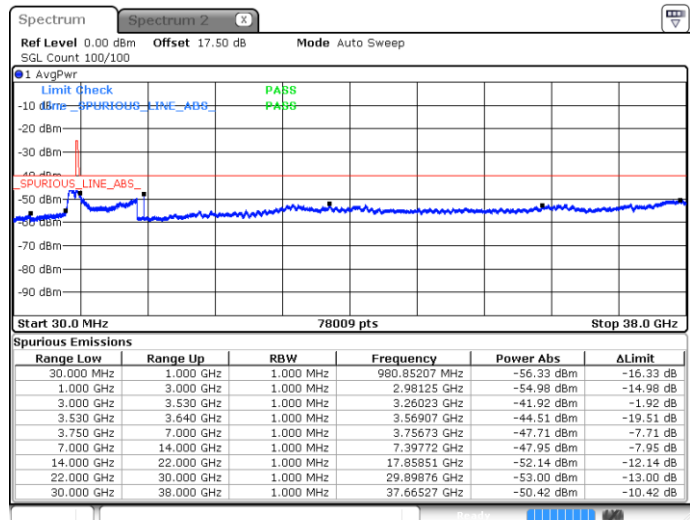
16QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



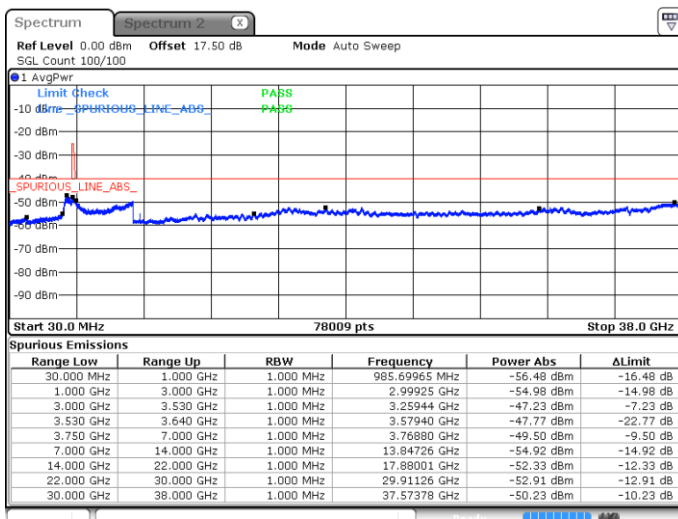
Date: 4 MAY 2020 02:19:24



Date: 4 MAY 2020 02:23:54

Highest Channel / FullIRB

N/A



Date: 4 MAY 2020 02:14:55

Frequency Stability

Test Conditions		LTE Band 48 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0000	PASS
40	Normal Voltage	0.0002	
30	Normal Voltage	0.0003	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0014	
0	Normal Voltage	0.0015	
-10	Normal Voltage	0.0008	
-20	Normal Voltage	0.0003	
-30	Normal Voltage	0.0003	
20	Maximum Voltage	0.0008	
20	Normal Voltage	0.0003	
20	Battery End Point	0.0016	

Note:

1. Normal Voltage =3.3 V. ; Battery End Point (BEP) =3.2 V. ; Maximum Voltage =3.6 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of EIRP and Radiated Test

EIRP

<Reporting Only>

LTE Band 48 / 5MHz (Average) (GT - LC = 0 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	22.95	0.1972	22.95	0.1972
Middle		1	0	21.50	0.1413	21.50	0.1413
Highest		1	0	22.42	0.1746	22.42	0.1746
Lowest	16QAM	1	24	22.59	0.1816	22.59	0.1816
Middle		1	24	20.70	0.1175	20.70	0.1175
Highest		1	24	21.89	0.1545	21.89	0.1545

LTE Band 48 / 10MHz (Average) (GT - LC = 0 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	49	22.92	0.1959	22.92	0.1959
Middle		1	49	21.51	0.1416	21.51	0.1416
Highest		1	49	22.65	0.1841	22.65	0.1841
Lowest	16QAM	1	25	22.38	0.1730	22.38	0.1730
Middle		1	25	20.58	0.1143	20.58	0.1143
Highest		1	25	21.58	0.1439	21.58	0.1439

LTE Band 48 / 15MHz (Average) (GT - LC = 0 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	37	22.62	0.1828	22.62	0.1828
Middle		1	37	21.58	0.1439	21.58	0.1439
Highest		1	37	22.80	0.1905	22.80	0.1905
Lowest	16QAM	1	37	22.49	0.1774	22.49	0.1774
Middle		1	37	20.74	0.1186	20.74	0.1186
Highest		1	37	21.93	0.1560	21.93	0.1560



LTE Band 48 / 20MHz (Average) (GT - LC = 0 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	49	22.85	0.1928	22.85	0.1928
Middle		1	49	21.53	0.1422	21.53	0.1422
Highest		1	49	22.96	0.1977	22.96	0.1977
Lowest	16QAM	1	49	22.70	0.1862	22.70	0.1862
Middle		1	49	20.94	0.1242	20.94	0.1242
Highest		1	49	22.12	0.1629	22.12	0.1629



EIRP Power

LTE Band 48 / Conducted Power						
BW	1.4MHz		3MHz		5MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	22.95	22.59
Middle CH	-	-	-	-	21.5	20.7
Highest CH	-	-	-	-	22.42	21.89
LTE Band 48 / Conducted Power						
BW	10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	22.92	22.38	22.62	22.49	22.85	22.70
Middle CH	21.51	20.58	21.58	20.74	21.53	20.94
Highest CH	22.65	21.58	22.80	21.93	22.96	22.12

LTE Band 48 / EIRP Power						
BW	1.4MHz		3MHz		5MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	22.95	22.59
Middle CH	-	-	-	-	21.5	20.7
Highest CH	-	-	-	-	22.42	21.89
LTE Band 48 / EIRP Power						
BW	10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	22.92	22.38	22.62	22.49	22.85	22.70
Middle CH	21.51	20.58	21.58	20.74	21.53	20.94
Highest CH	22.65	21.58	22.80	21.93	22.96	22.12
Antenna Gain	0 dBi					
Limit	23dBm / 10MHz					
Result	Pass					

**Radiated Spurious Emission****LTE Band 48**

LTE Band 48 / 20MHz / QPSK									
Channel	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)
Lowest	7120	-45.66	-40	-5.66	-47.71	-55.58	1.78	11.71	H
	10680	-51.97	-40	-11.97	-54.25	-60.39	2.48	10.90	H
	14240	-54.69	-40	-14.69	-61.77	-63.45	2.87	11.62	H
	21363	-53.73	-40	-13.73	-75.43	-70.47	1.96	18.70	H
	24915	-52.39	-40	-12.39	-77.05	-68.48	2.07	18.16	H
	28478	-50.26	-40	-10.26	-75.78	-67.55	2.30	19.59	H
	7120	-45.16	-40	-5.16	-46.84	-55.08	1.78	11.71	V
	10680	-52.58	-40	-12.58	-54.62	-61.00	2.48	10.90	V
	14240	-53.75	-40	-13.75	-60.48	-62.51	2.87	11.62	V
	21363	-54.39	-40	-14.39	-76	-71.13	1.96	18.70	V
	24915	-49.59	-40	-9.59	-75.43	-65.68	2.07	18.16	V
	28478	-48.60	-40	-8.60	-76	-65.89	2.30	19.59	V
Middle	7250	-49.81	-40	-9.81	-52.17	-59.46	1.86	11.50	H
	10875	-53.92	-40	-13.92	-56.25	-62.24	2.59	10.90	H
	14500	-56.95	-40	-16.95	-64.25	-65.10	2.85	11.00	H
	18122	-51.04	-40	-11.04	-69.18	-67.24	1.77	17.98	H
	21751	-54.39	-40	-14.39	-75.96	-71.18	2.01	18.80	H
	25370	-51.07	-40	-11.07	-76.32	-67.74	2.15	18.82	H
	7250	-46.12	-40	-6.12	-48.23	-55.77	1.86	11.50	V
	10875	-55.23	-40	-15.23	-57.36	-63.55	2.59	10.90	V
	14500	-56.08	-40	-16.08	-62.48	-64.23	2.85	11.00	V
	18122	-50.92	-40	-10.92	-68.14	-67.12	1.77	17.98	V
	21751	-54.83	-40	-14.83	-76.39	-71.62	2.01	18.80	V
	25370	-50.32	-40	-10.32	-76.86	-66.99	2.15	18.82	V



LTE Band 48 / 20MHz / QPSK									
Channel	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)
Highest	7380	-42.81	-40	-2.81	-45.13	-52.18	1.93	11.29	H
	11070	-57.32	-40	-17.32	-59.86	-65.68	2.62	10.98	H
	14760	-55.46	-40	-15.46	-64.55	-64.37	2.92	11.83	H
	18444	-55.14	-40	-15.14	-73.48	-71.17	1.88	17.91	H
	22140	-52.57	-40	-12.57	-74.96	-69.35	2.06	18.84	H
	25825	-50.00	-40	-10.00	-76.1	-67.06	2.00	19.07	H
	7380	-43.09	-40	-3.09	-45.24	-52.46	1.93	11.29	V
	11070	-58.10	-40	-18.10	-60.47	-66.46	2.62	10.98	V
	14760	-55.44	-40	-15.44	-62.74	-64.35	2.92	11.83	V
	18444	-50.54	-40	-10.54	-68.01	-66.57	1.88	17.91	V
	22140	-52.68	-40	-12.68	-75.08	-69.46	2.06	18.84	V
	25825	-49.26	-40	-9.26	-76.52	-66.32	2.00	19.07	V

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