

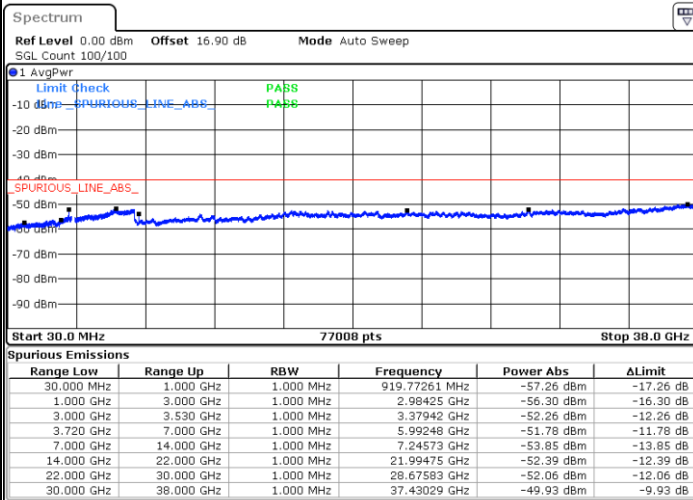


LTE Band 48 / 5MHz

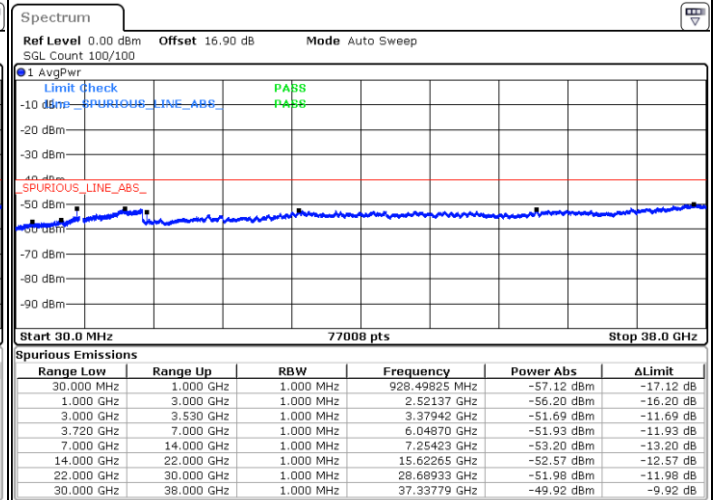
64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



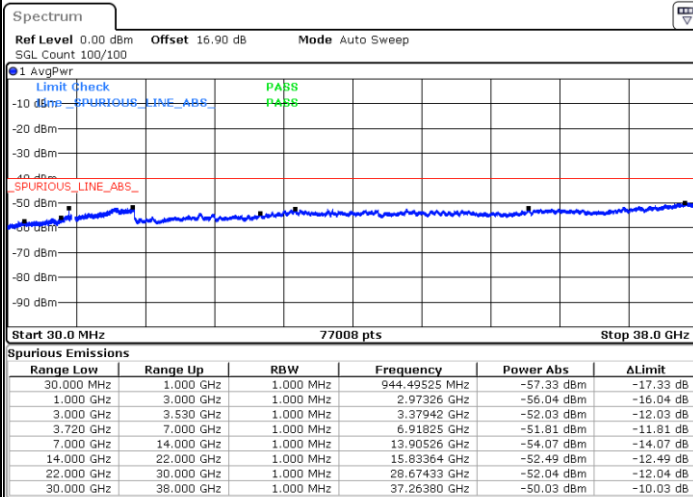
Date: 27.SEP.2020 19:56:08



Date: 27.SEP.2020 20:15:29

Middle Channel / FullRB

N/A



Date: 27.SEP.2020 20:05:48

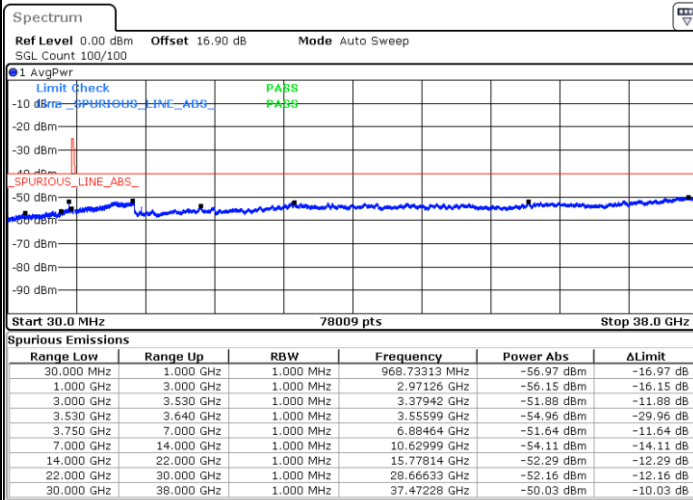


LTE Band 48 / 5MHz

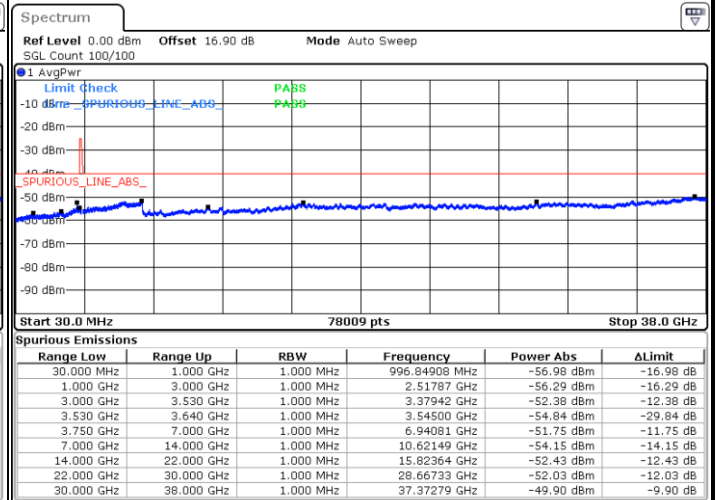
64QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



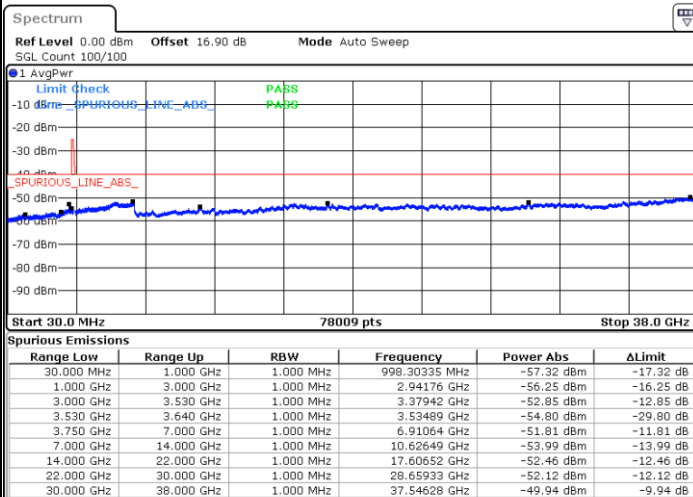
Date: 27.SEP.2020 20:01:30



Date: 27.SEP.2020 20:20:51

Highest Channel / FullIRB

N/A



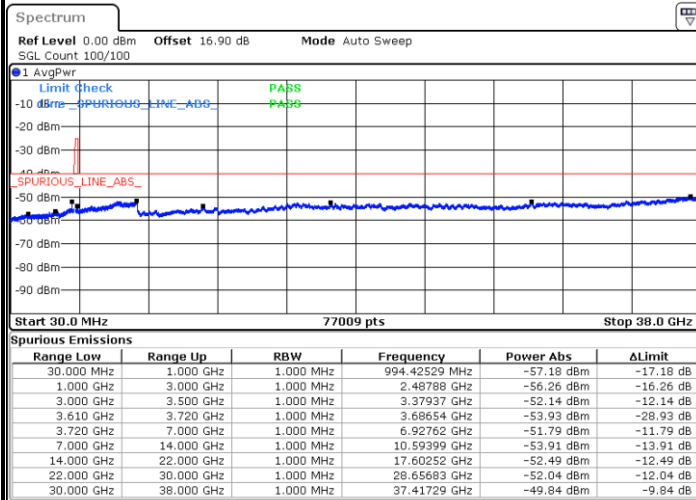
Date: 27.SEP.2020 20:11:10



LTE Band 48 / 10MHz

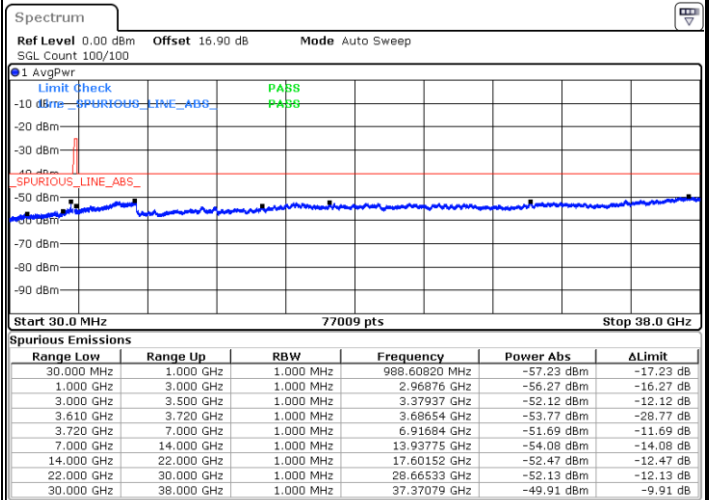
64QAM

Lowest Channel / 1RB0



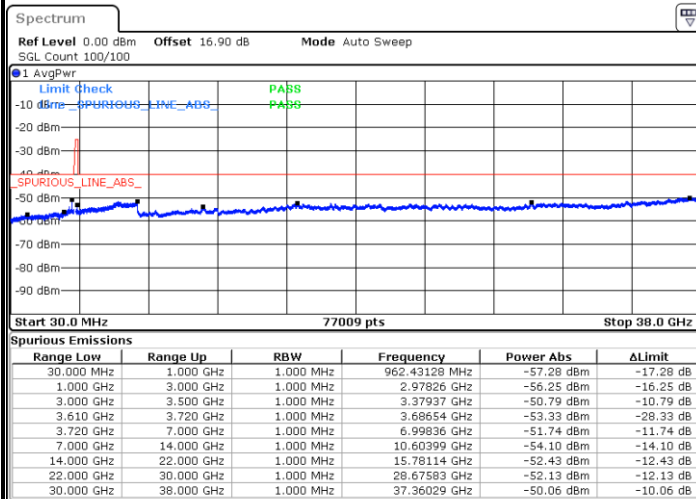
Date: 27.SEP.2020 20:21:57

Lowest Channel / 1RBmax



Date: 27.SEP.2020 20:41:17

Lowest Channel / FullIRB



Date: 27.SEP.2020 20:31:37

N/A

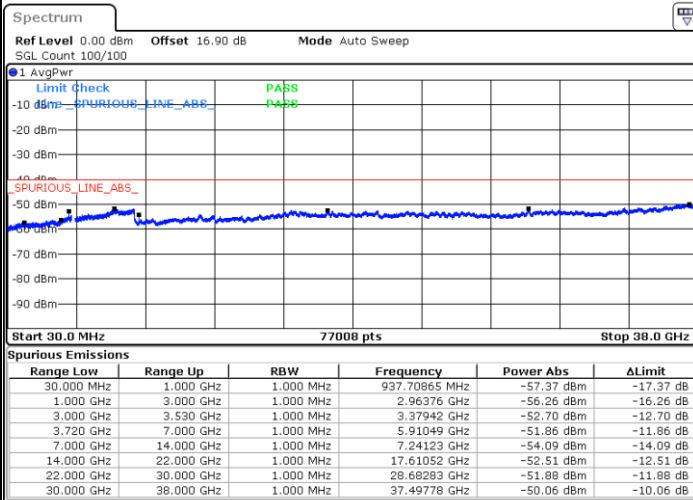


LTE Band 48 / 10MHz

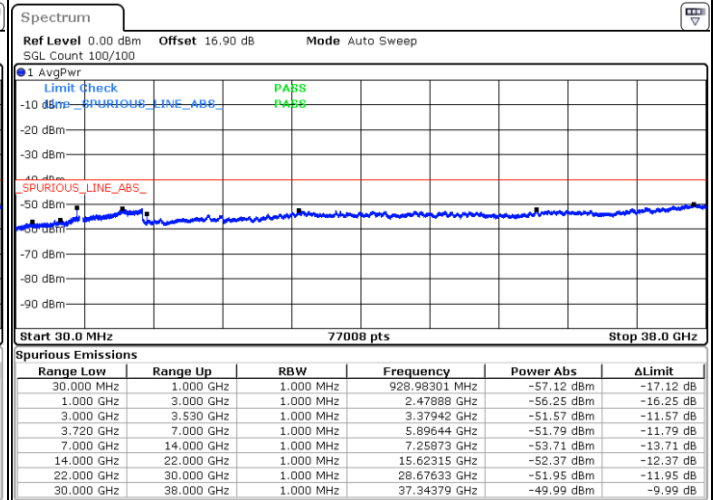
64QAM

MiddleChannel / 1RB0

Middle Channel / 1RBmax



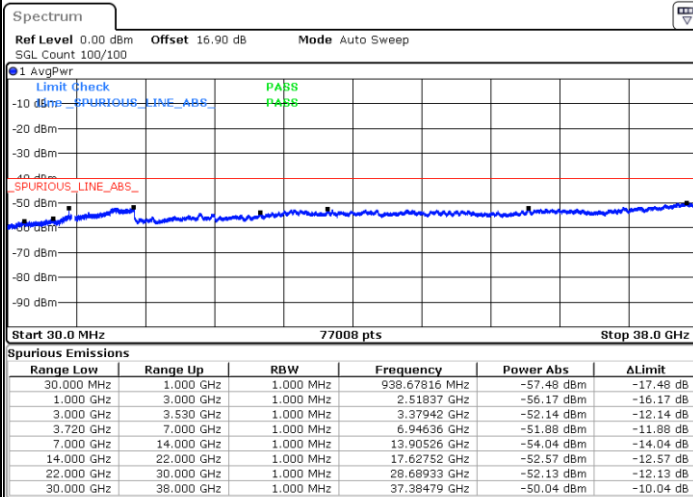
Date: 27.SEP.2020 20:27:18



Date: 27.SEP.2020 20:46:39

Middle Channel / FullRB

N/A



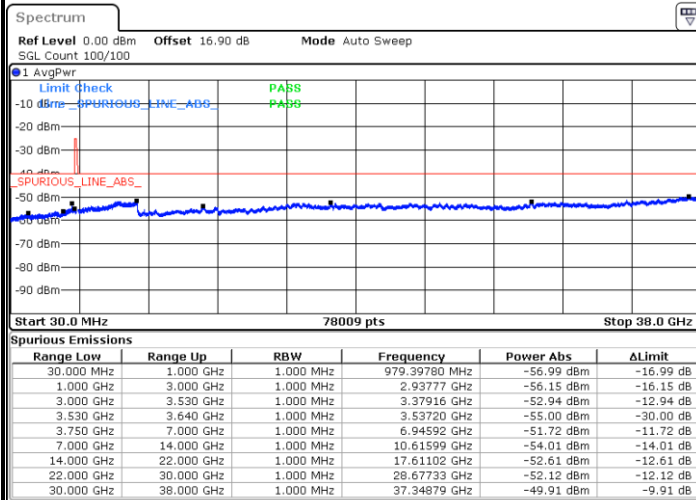
Date: 27.SEP.2020 20:36:58



LTE Band 48 / 10MHz

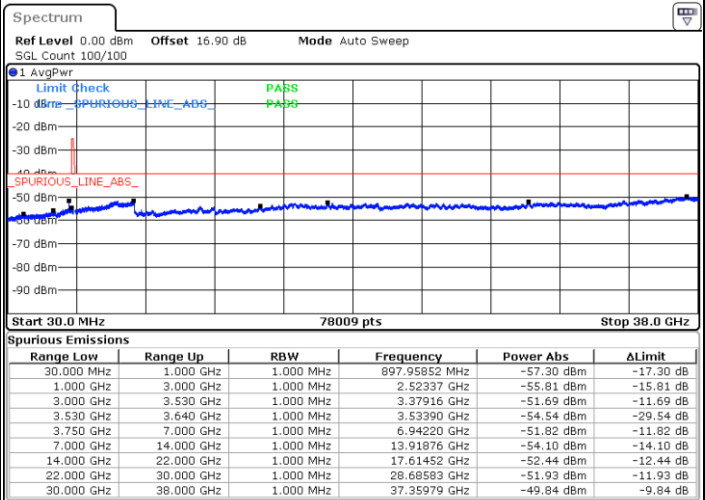
64QAM

Highest Channel / 1RB0



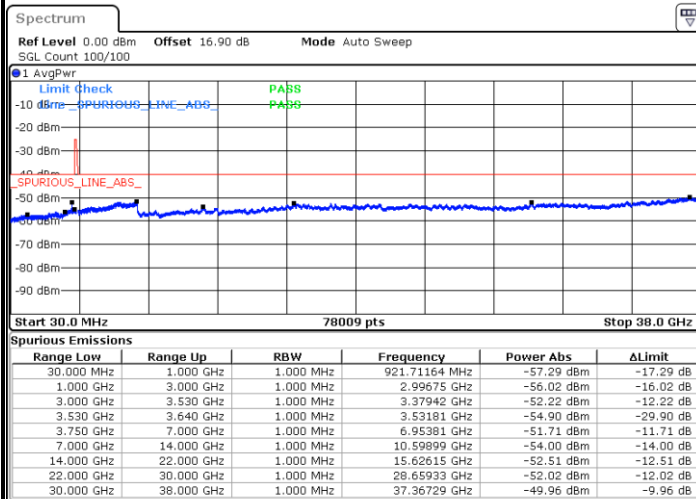
Date: 27.SEP.2020 20:28:22

Highest Channel / 1RBmax



Date: 27.SEP.2020 20:47:44

Highest Channel / FullIRB



Date: 27.SEP.2020 20:38:03

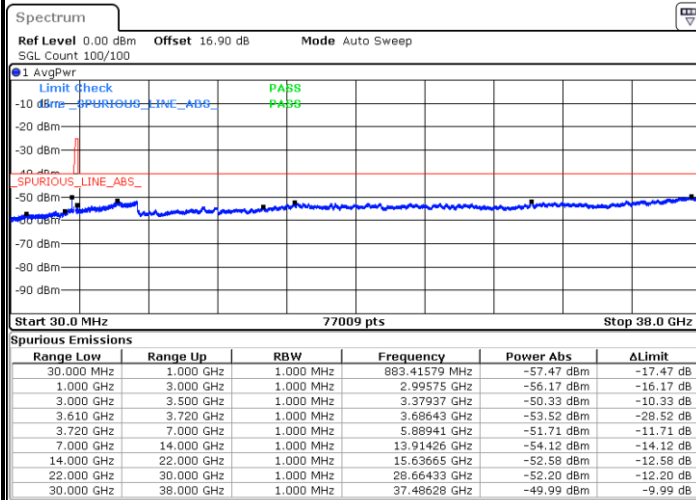
N/A



LTE Band 48 / 15MHz

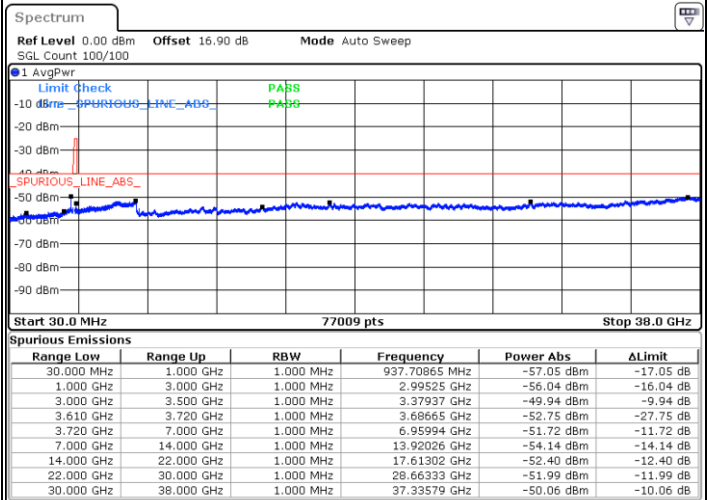
64QAM

Lowest Channel / 1RB0



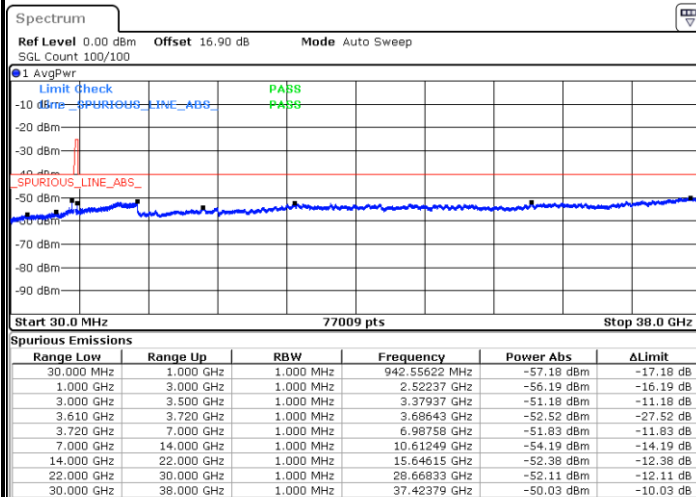
Date: 27.SEP.2020 20:53:08

Lowest Channel / 1RBmax



Date: 27.SEP.2020 21:12:29

Lowest Channel / FullIRB



Date: 27.SEP.2020 21:02:49

N/A

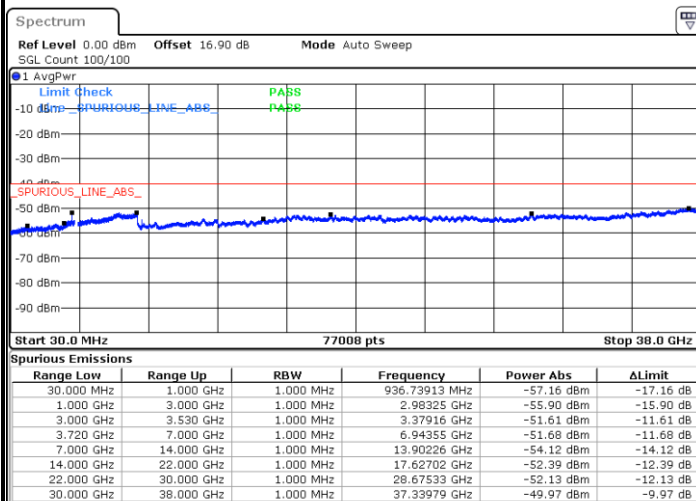


LTE Band 48 / 15MHz

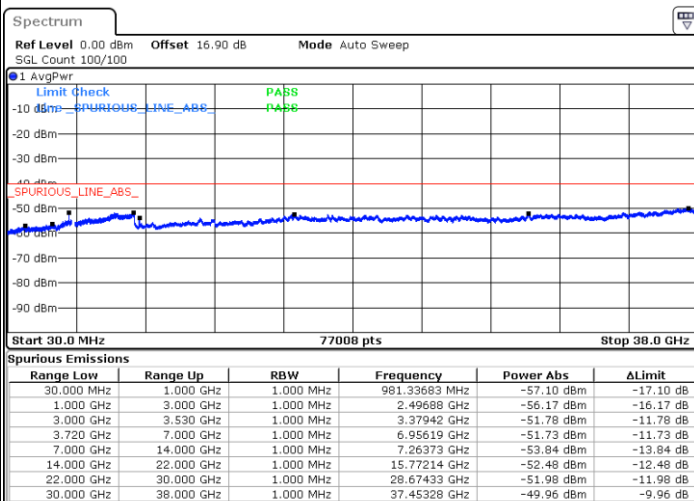
64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



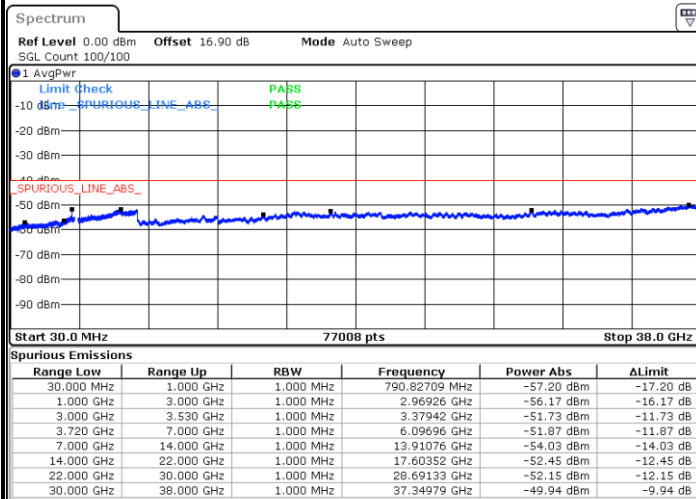
Date: 27.SEP.2020 20:54:12



Date: 27.SEP.2020 21:13:34

Middle Channel / FullRB

N/A



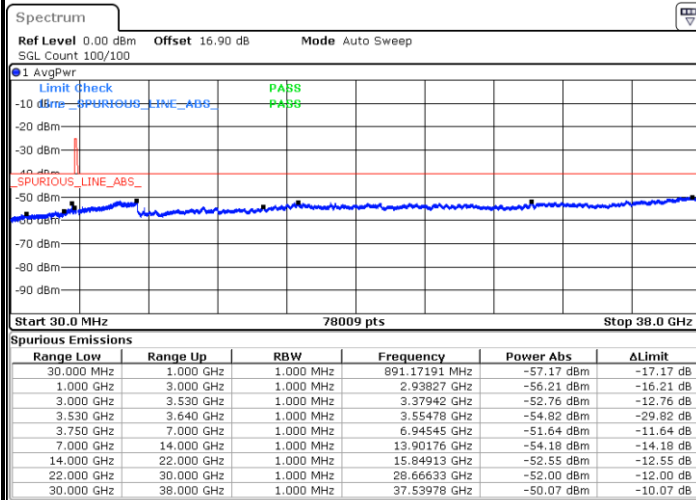
Date: 27.SEP.2020 21:03:53



LTE Band 48 / 15MHz

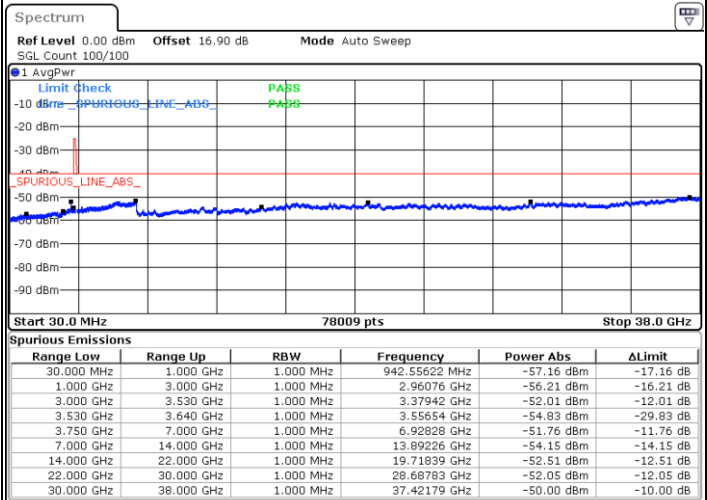
64QAM

Highest Channel / 1RB0



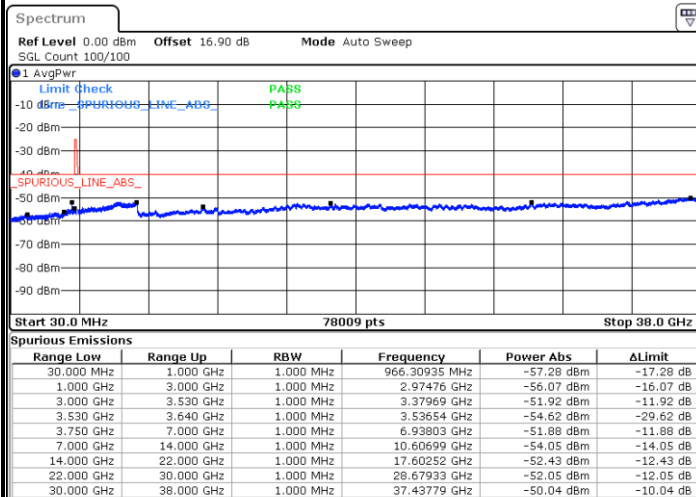
Date: 27.SEP.2020 20:59:35

Highest Channel / 1RBmax



Date: 27.SEP.2020 21:18:55

Highest Channel / FullIRB



Date: 27.SEP.2020 21:09:15

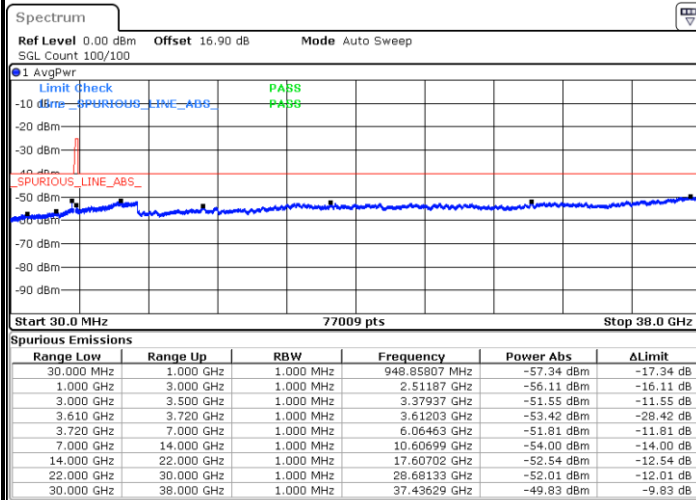
N/A



LTE Band 48 / 20MHz

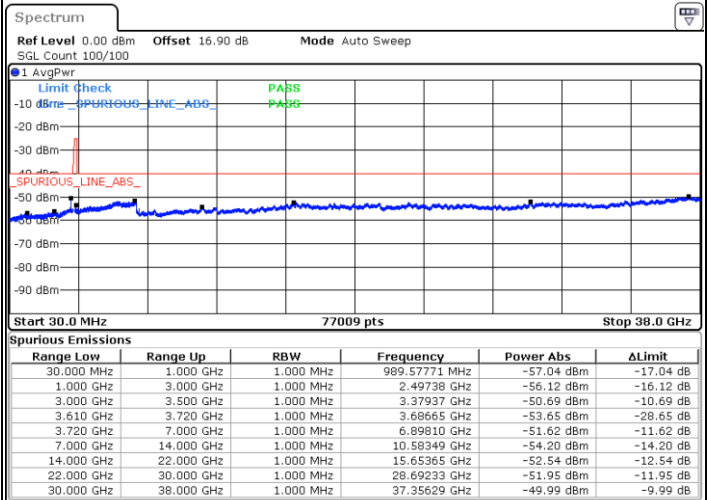
64QAM

Lowest Channel / 1RB0



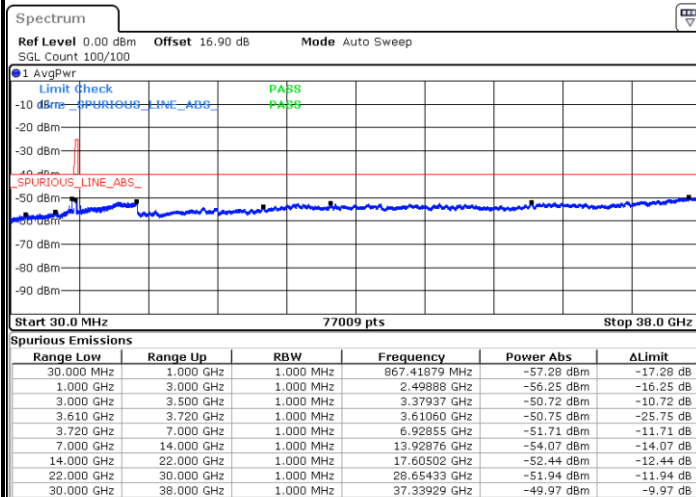
Date: 27.SEP.2020 21:29:41

Lowest Channel / 1RBmax



Date: 27.SEP.2020 21:39:22

Lowest Channel / FullIRB



Date: 27.SEP.2020 21:20:01

N/A

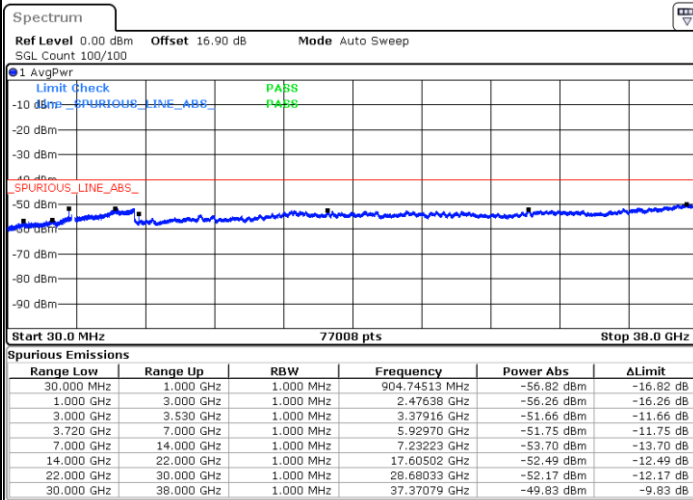


LTE Band 48 / 20MHz

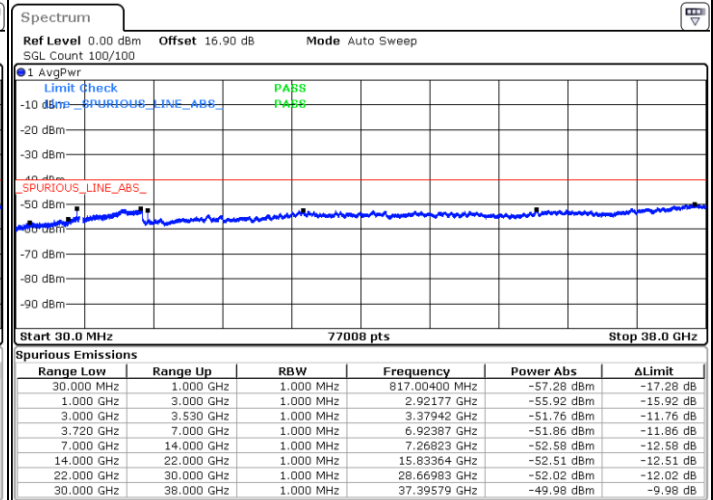
64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



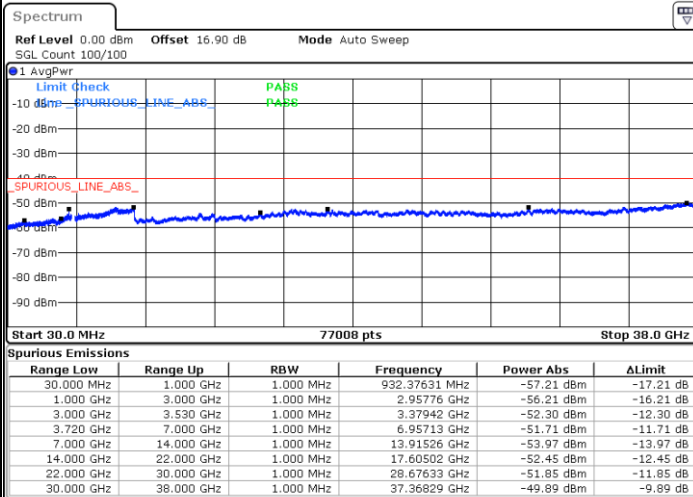
Date: 27.SEP.2020 21:35:02



Date: 27.SEP.2020 21:44:43

Middle Channel / FullRB

N/A



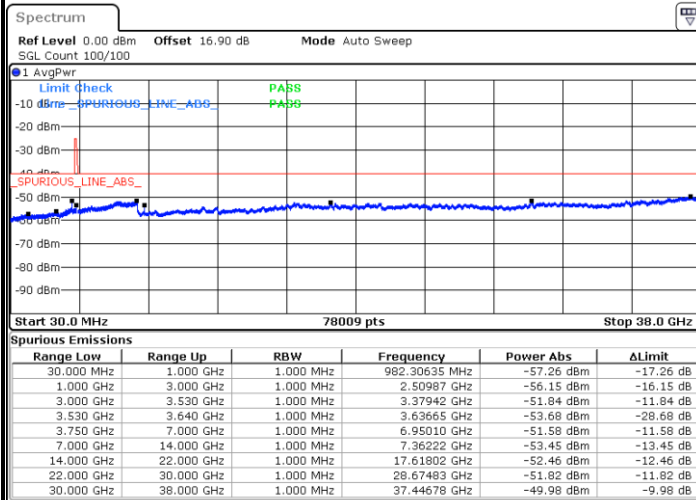
Date: 27.SEP.2020 21:25:22



LTE Band 48 / 20MHz

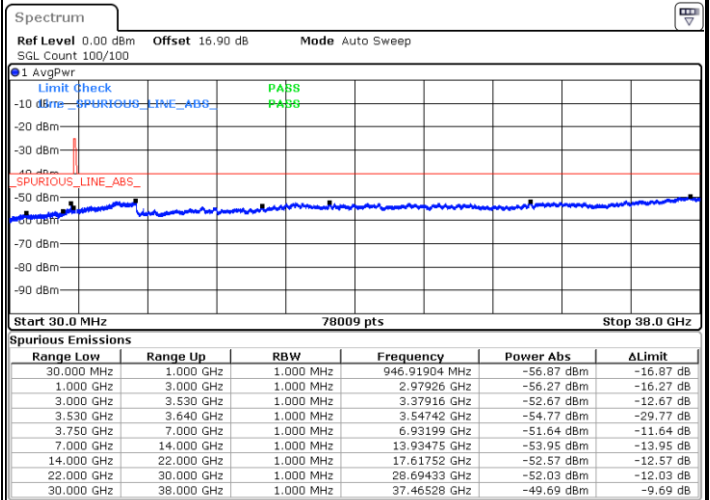
64QAM

Highest Channel / 1RB0



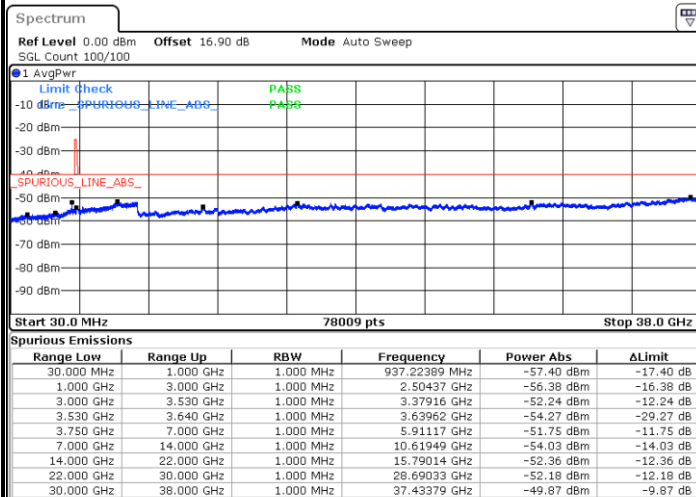
Date: 27.SEP.2020 21:36:07

Highest Channel / 1RBmax



Date: 27.SEP.2020 21:45:47

Highest Channel / FullIRB



Date: 27.SEP.2020 21:26:26

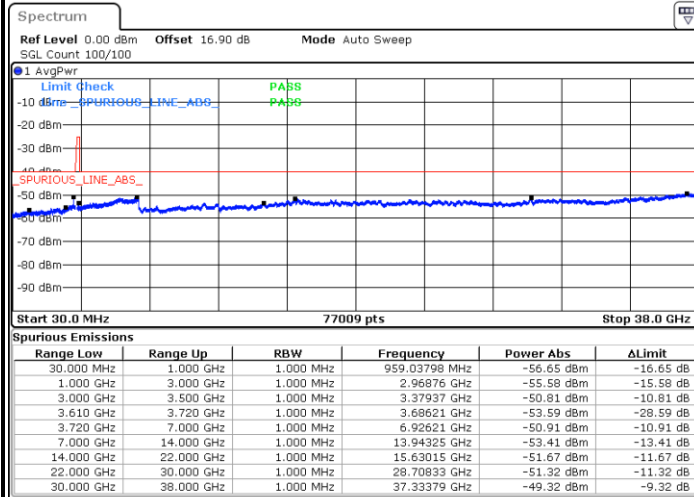
N/A



LTE Band 48 / 5MHz

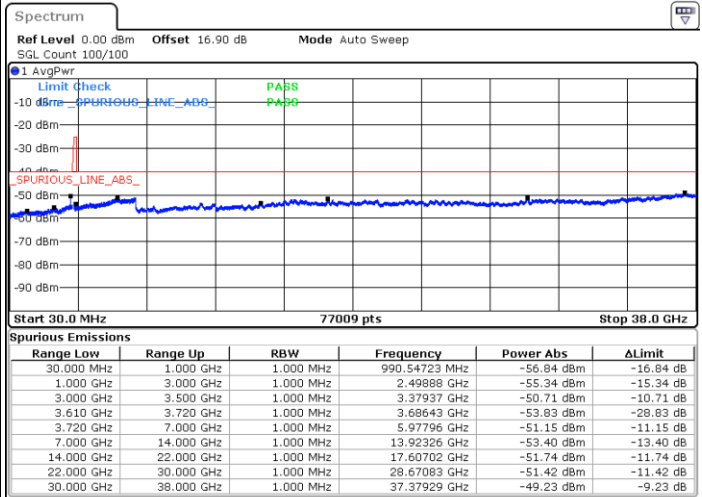
256QAM

Lowest Channel / 1RB0



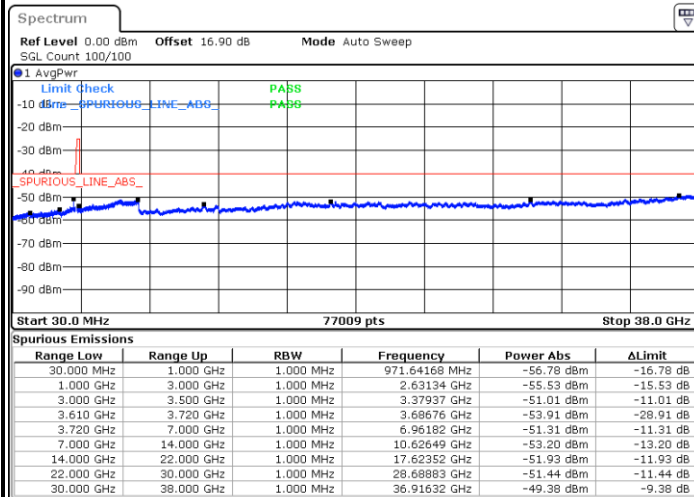
Date: 29.SEP.2020 11:06:41

Lowest Channel / 1RBmax



Date: 29.SEP.2020 11:10:30

Lowest Channel / FullIRB



Date: 29.SEP.2020 11:04:20

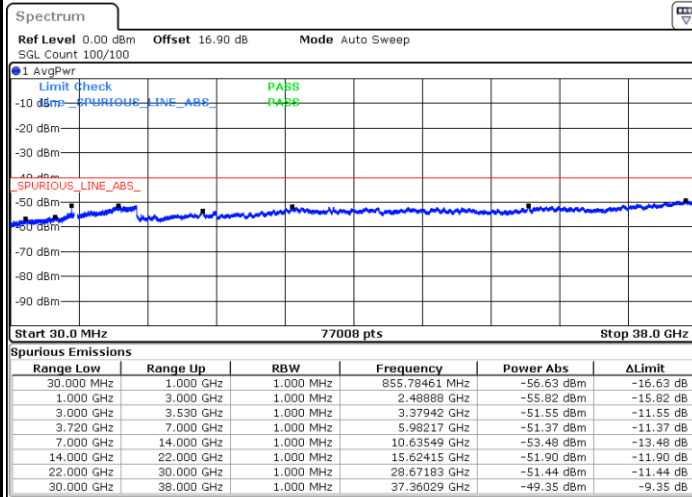
N/A



LTE Band 48 / 5MHz

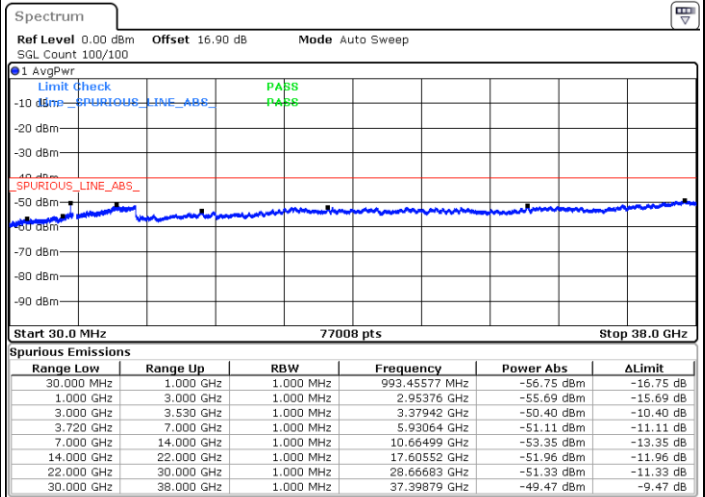
256QAM

Middle Channel / 1RB0



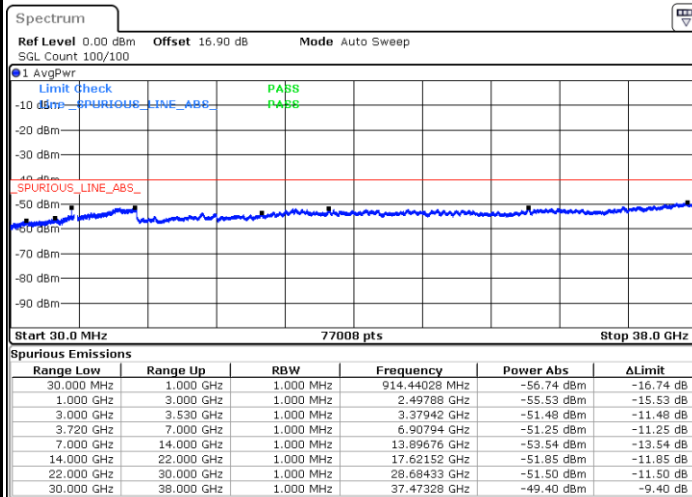
Date: 29.SEP.2020 10:58:36

Middle Channel / 1RBmax



Date: 29.SEP.2020 11:01:25

Middle Channel / FullRB



Date: 29.SEP.2020 10:56:15

N/A

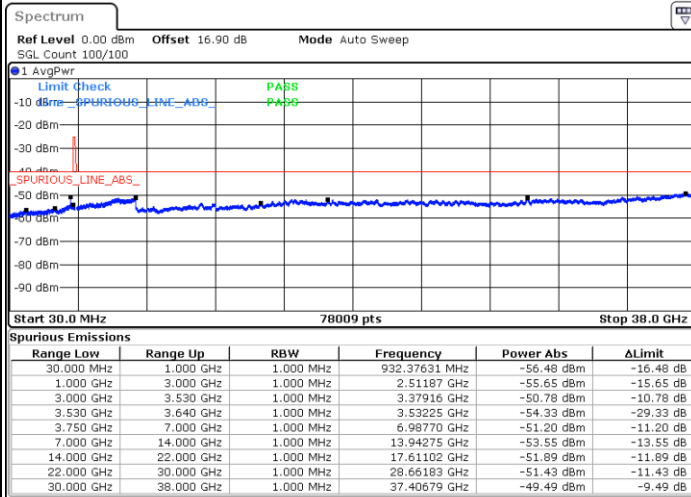


LTE Band 48 / 5MHz

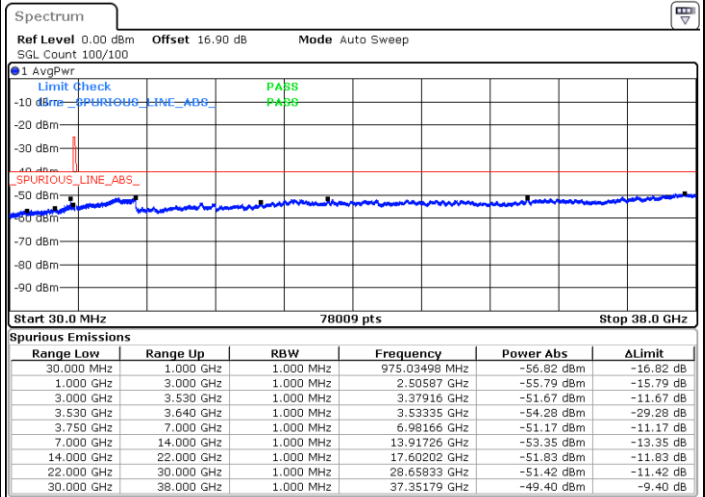
256QAM

Highest Channel / 1RB0

Highest Channel / 1RBmax



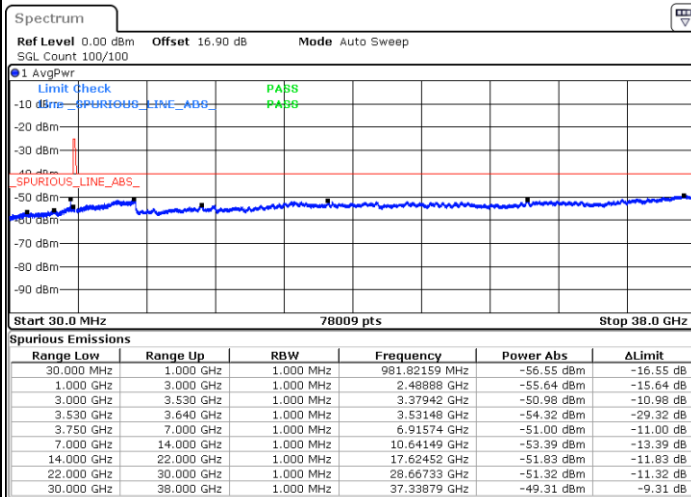
Date: 29.SEP.2020 11:16:16



Date: 29.SEP.2020 11:18:38

Highest Channel / FullIRB

N/A



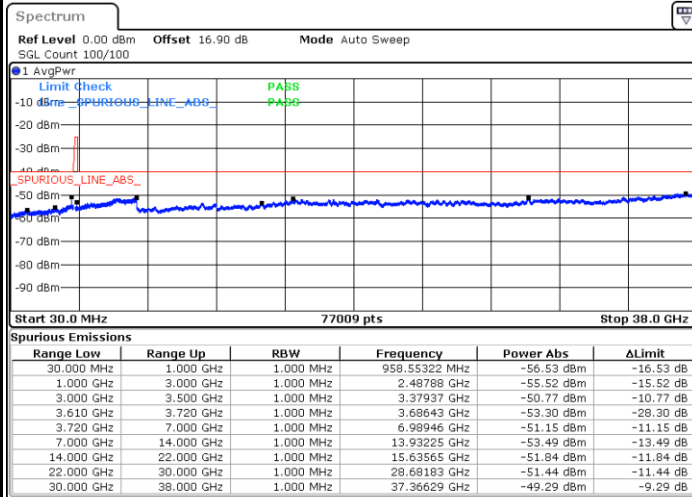
Date: 29.SEP.2020 11:13:33



LTE Band 48 / 10MHz

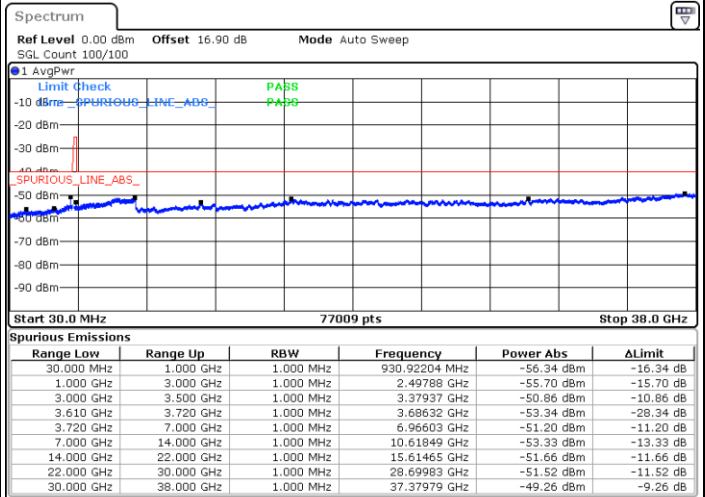
256QAM

Lowest Channel / 1RB0



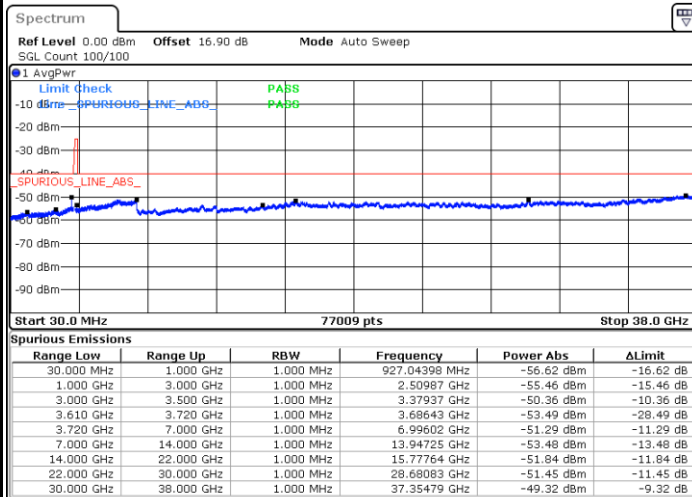
Date: 29.SEP.2020 11:33:11

Lowest Channel / 1RBmax



Date: 29.SEP.2020 11:35:21

Lowest Channel / FullIRB



Date: 29.SEP.2020 11:31:05

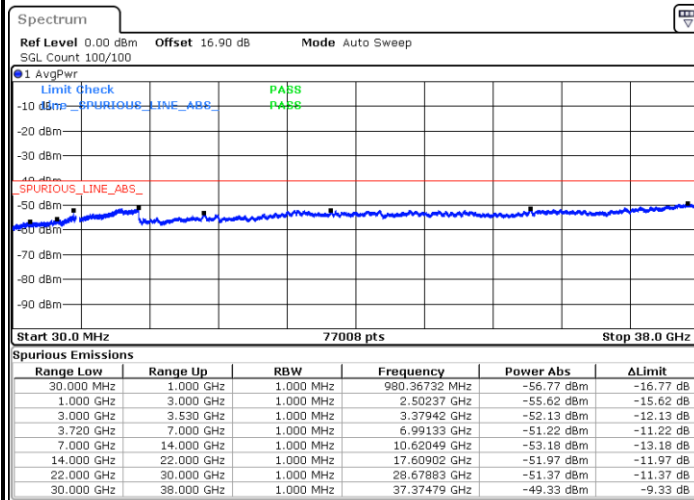
N/A



LTE Band 48 / 10MHz

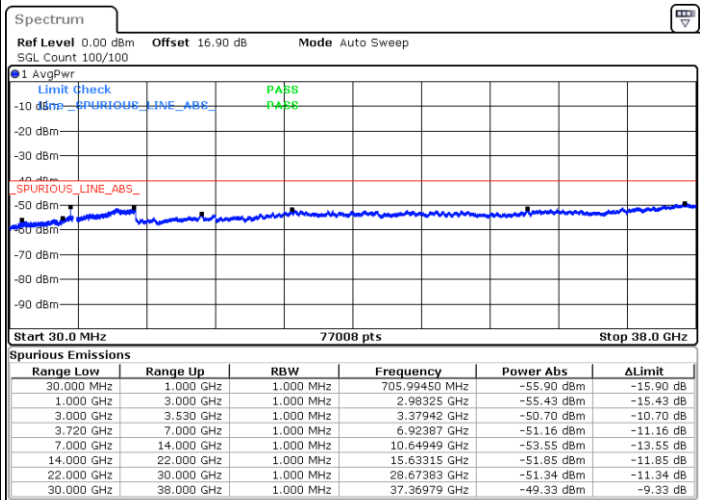
256QAM

MiddleChannel / 1RB0



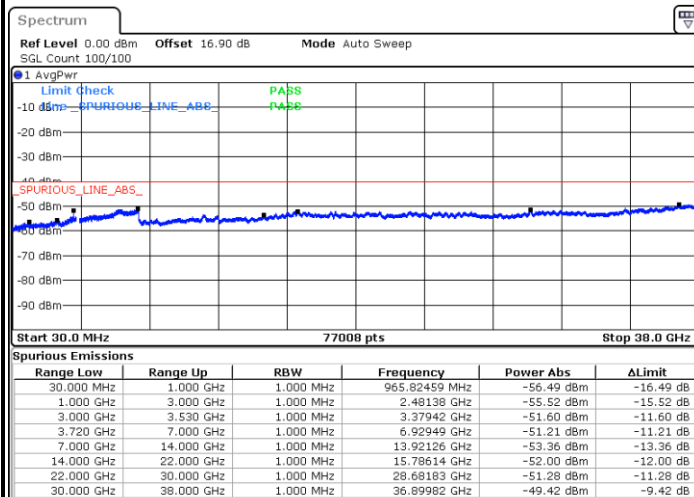
Date: 29.SEP.2020 11:25:27

Middle Channel / 1RBmax



Date: 29.SEP.2020 11:28:15

Middle Channel / FullRB



Date: 29.SEP.2020 11:22:05

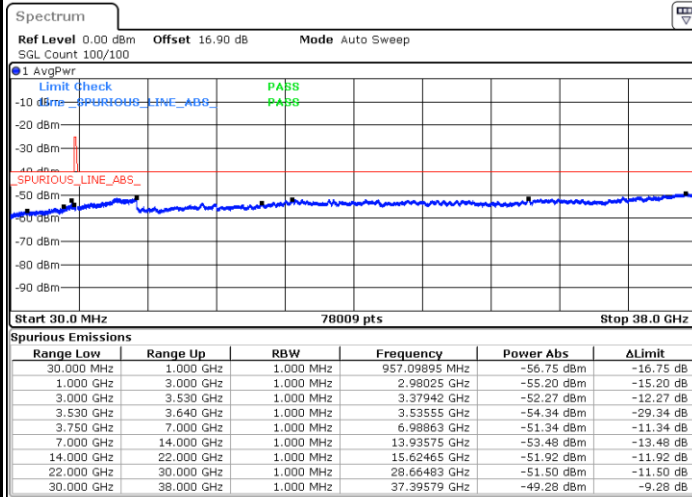
N/A



LTE Band 48 / 10MHz

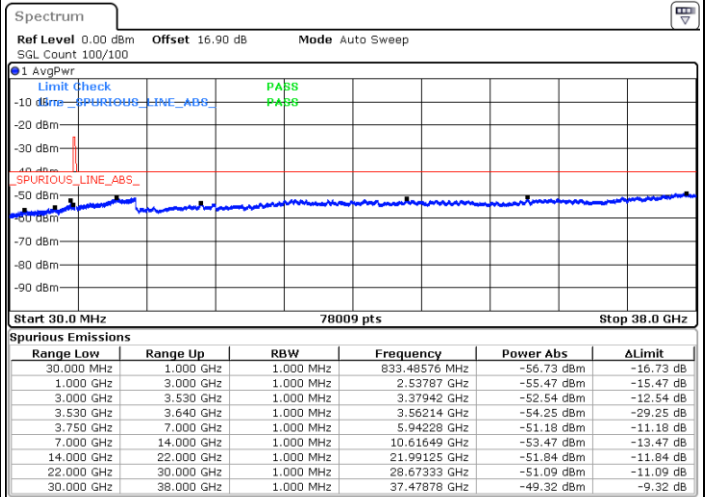
256QAM

Highest Channel / 1RB0



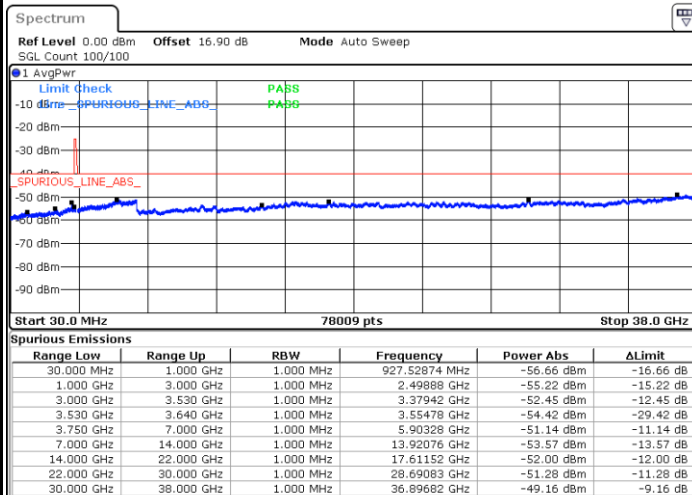
Date: 29.SEP.2020 14:08:10

Highest Channel / 1RBmax



Date: 29.SEP.2020 14:10:34

Highest Channel / FullRB



Date: 29.SEP.2020 14:05:57

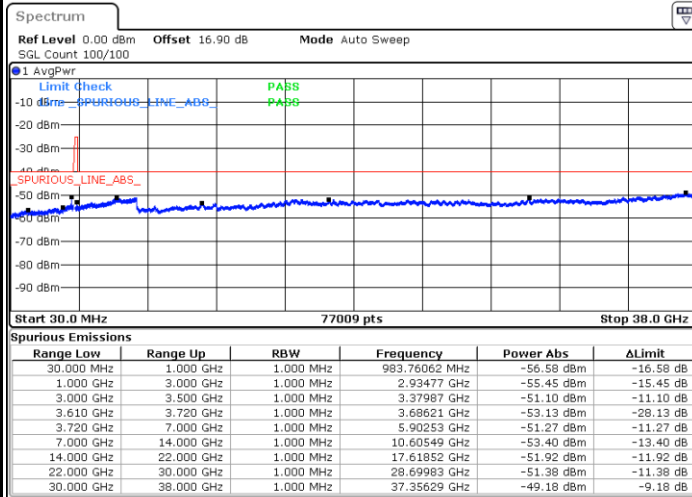
N/A



LTE Band 48 / 15MHz

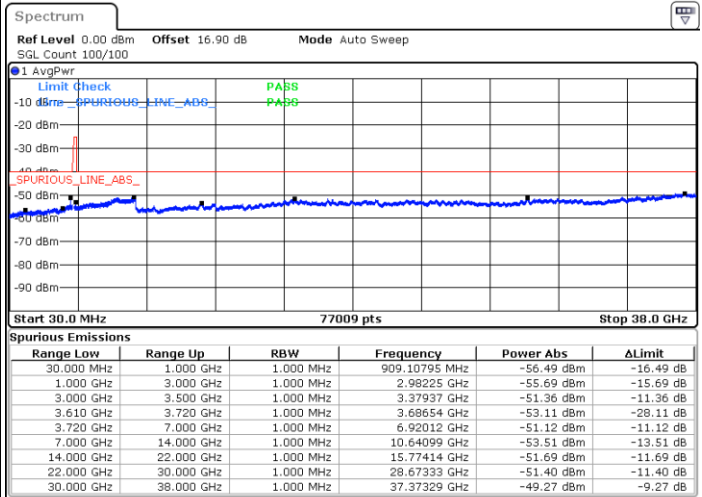
256QAM

Lowest Channel / 1RB0



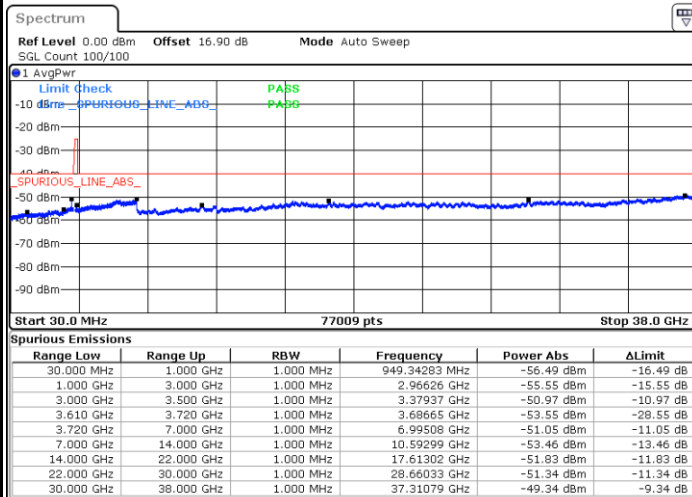
Date: 29.SEP.2020 14:27:44

Lowest Channel / 1RBmax



Date: 29.SEP.2020 14:30:14

Lowest Channel / FullIRB



Date: 29.SEP.2020 14:25:03

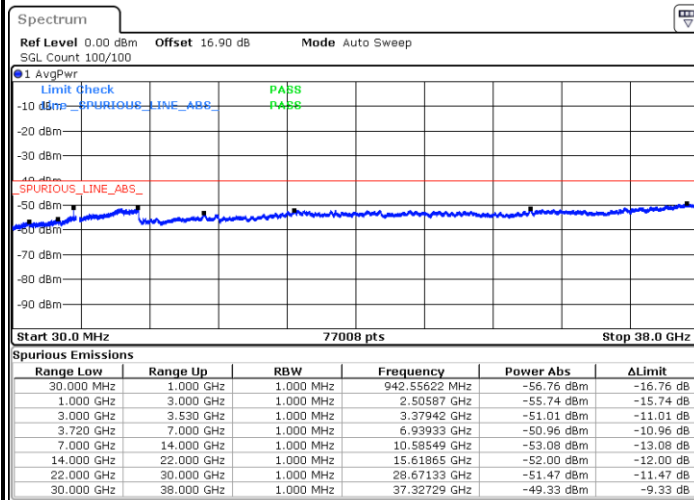
N/A



LTE Band 48 / 15MHz

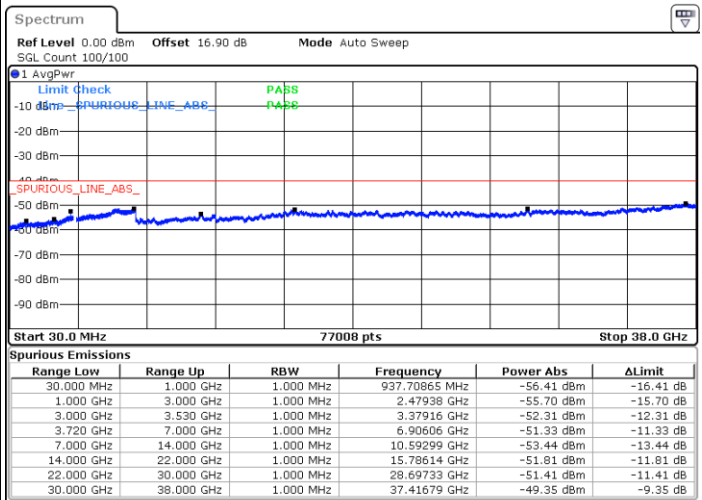
256QAM

Middle Channel / 1RB0



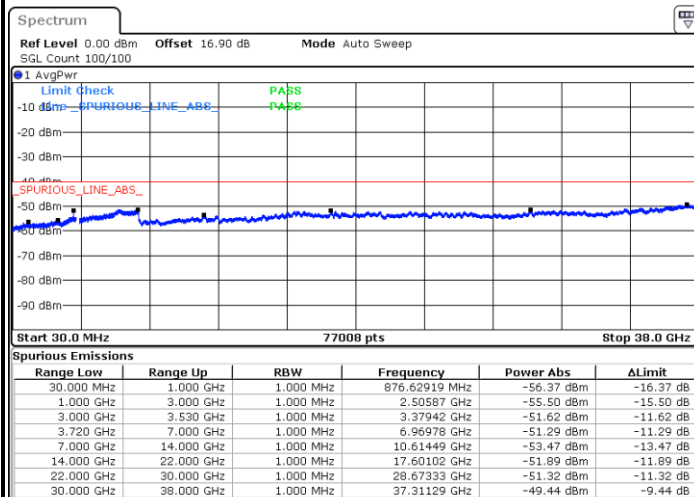
Date: 29.SEP.2020 14:17:58

Middle Channel / 1RBmax



Date: 29.SEP.2020 14:21:18

Middle Channel / FullRB



Date: 29.SEP.2020 14:14:49

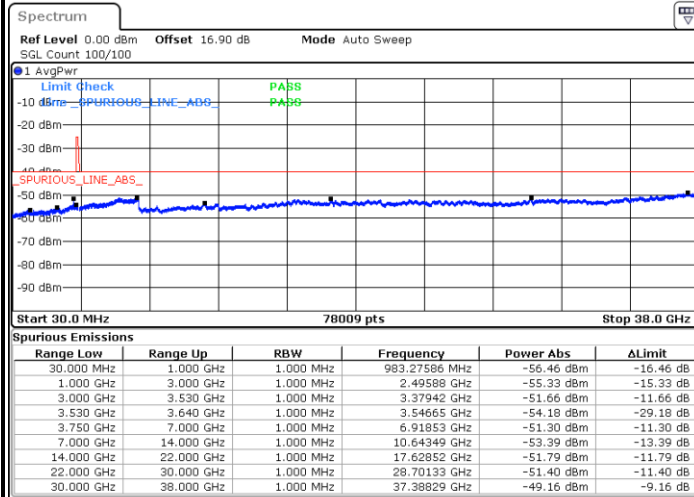
N/A



LTE Band 48 / 15MHz

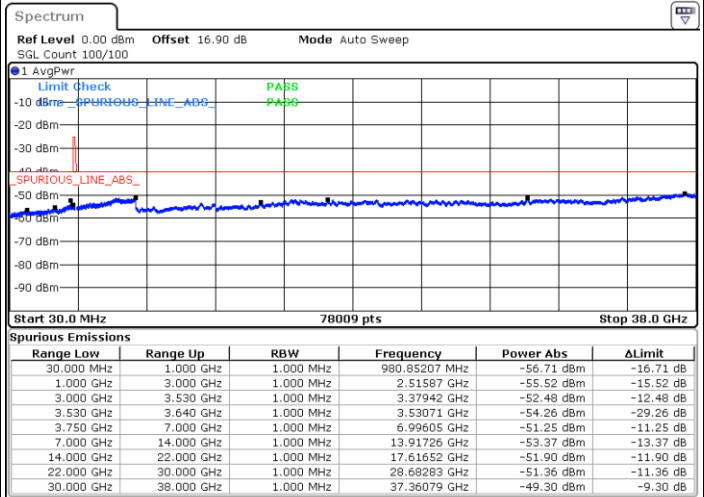
256QAM

Highest Channel / 1RB0



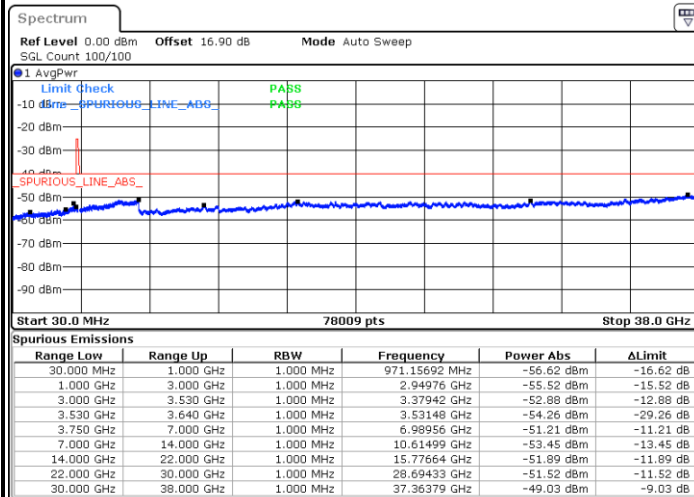
Date: 29.SEP.2020 14:35:54

Highest Channel / 1RBmax



Date: 29.SEP.2020 14:38:27

Highest Channel / FullRB



Date: 29.SEP.2020 14:33:20

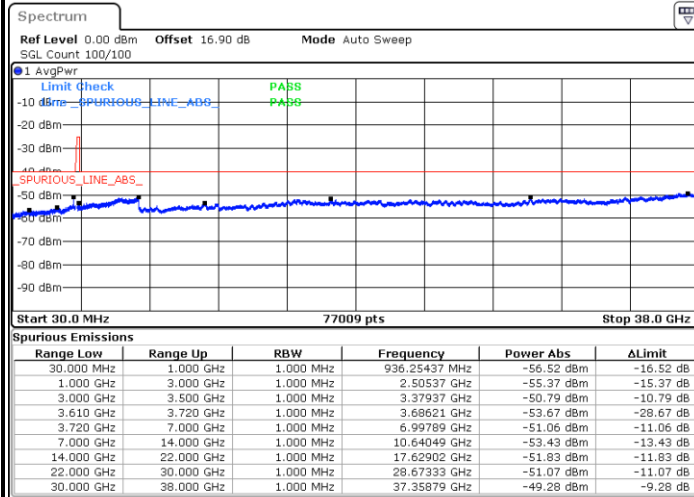
N/A



LTE Band 48 / 20MHz

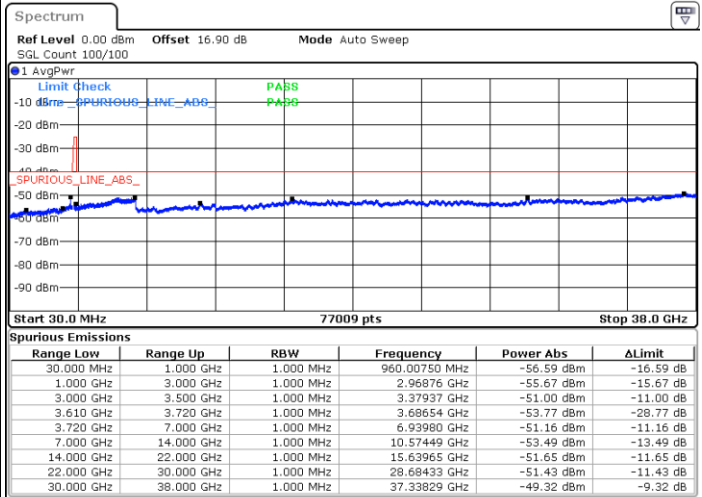
256QAM

Lowest Channel / 1RB0



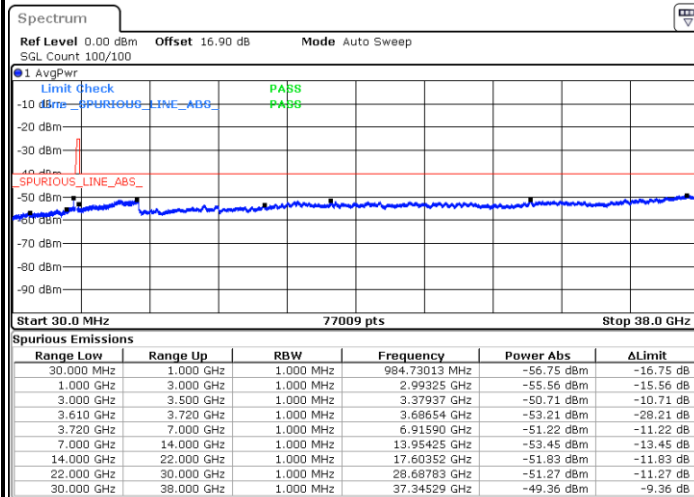
Date: 29.SEP.2020 15:17:33

Lowest Channel / 1RBmax



Date: 29.SEP.2020 15:20:15

Lowest Channel / FullIRB



Date: 29.SEP.2020 15:13:08

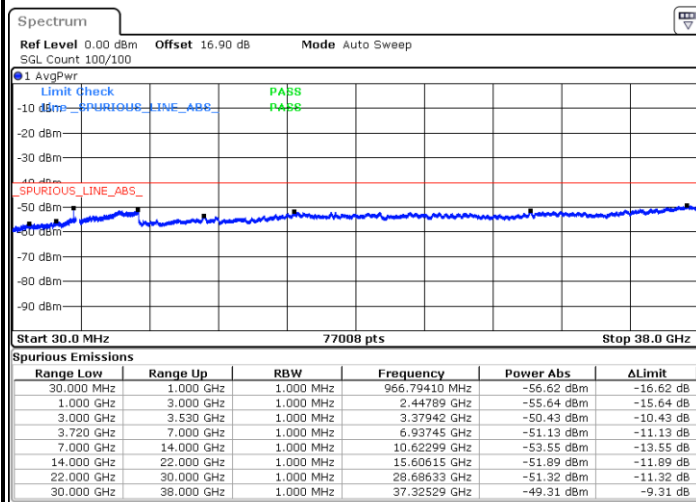
N/A



LTE Band 48 / 20MHz

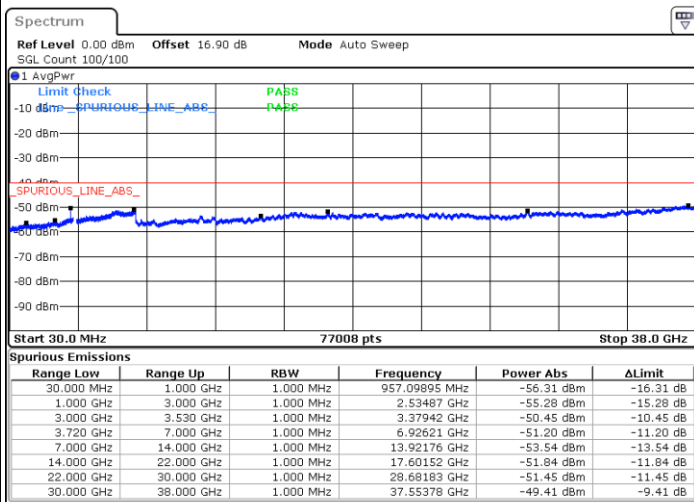
256QAM

Middle Channel / 1RB0



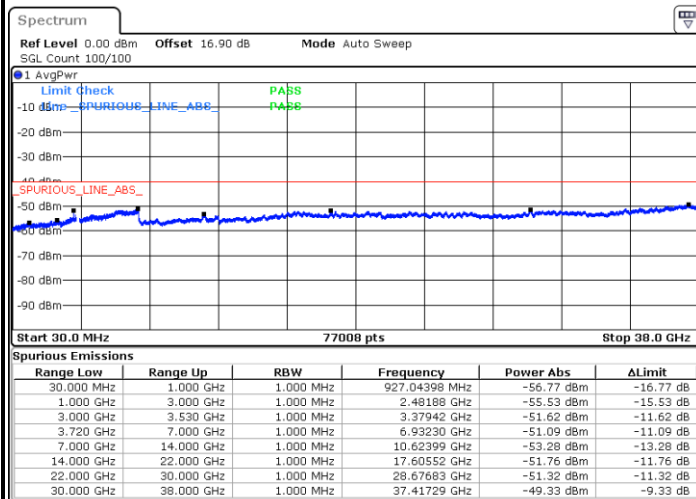
Date: 29.SEP.2020 14:45:09

Middle Channel / 1RBmax



Date: 29.SEP.2020 14:48:34

Middle Channel / FullRB



Date: 29.SEP.2020 14:42:03

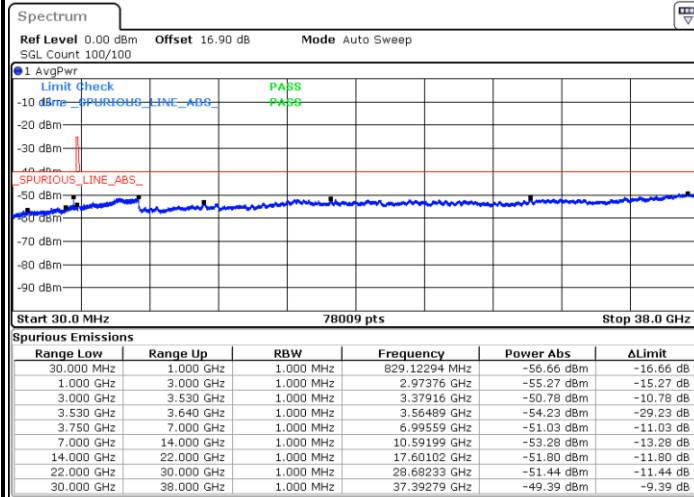
N/A



LTE Band 48 / 20MHz

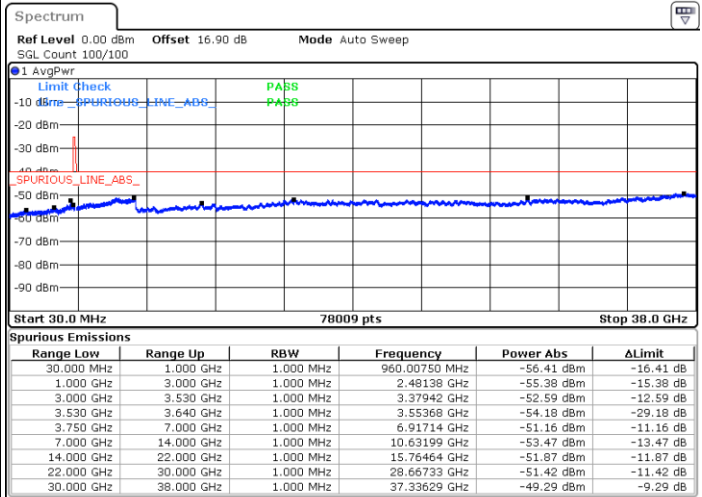
256QAM

Highest Channel / 1RB0



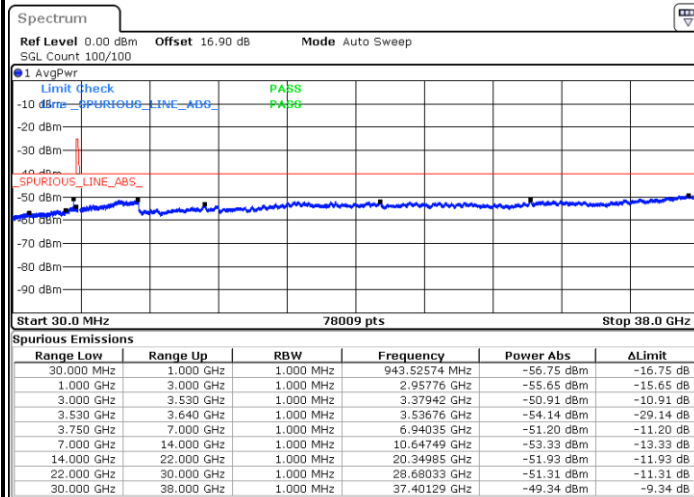
Date: 29.SEP.2020 15:27:16

Highest Channel / 1RBmax



Date: 29.SEP.2020 15:29:50

Highest Channel / FullRB



Date: 29.SEP.2020 15:23:44

N/A

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	0.0052	PASS
40	Normal Voltage	0.0049	
30	Normal Voltage	0.0015	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0008	
0	Normal Voltage	0.0001	
-10	Normal Voltage	0.0056	
-20	Normal Voltage	0.0055	
-30	Normal Voltage	0.0011	
20	Maximum Voltage	0.0009	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0007	

Note:

1. Normal Voltage =3.85 V. ; Battery End Point (BEP) =3.3 V. ; Maximum Voltage =4.25 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 = 3.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	12	19.27	0.0845	22.77	0.1892
Middle		1	12	18.37	0.0687	21.87	0.1538
Highest		1	12	18.38	0.0689	21.88	0.1542
Lowest	16QAM	1	24	18.40	0.0692	21.90	0.1549
Middle		1	24	17.51	0.0564	21.01	0.1262
Highest		1	24	17.33	0.0541	20.83	0.1211
Lowest	64QAM	1	12	17.07	0.0509	20.57	0.1140
Middle		1	12	16.08	0.0406	19.58	0.0908
Highest		1	12	16.11	0.0408	19.61	0.0914
Lowest	256QAM	12	7	14.46	0.0279	17.96	0.0625
Middle		12	7	13.50	0.0224	17.00	0.0501
Highest		12	7	13.32	0.0215	16.82	0.0481

LTE Band 48 / 10MHz (Average) (GT - LC = 3.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	25	19.32	0.0855	22.82	0.1914
Middle		1	25	18.44	0.0698	21.94	0.1563
Highest		1	25	18.35	0.0684	21.85	0.1531
Lowest	16QAM	1	0	18.46	0.0701	21.96	0.1570
Middle		1	0	17.64	0.0581	21.14	0.1300
Highest		1	0	17.48	0.0560	20.98	0.1253
Lowest	64QAM	1	25	17.05	0.0507	20.55	0.1135
Middle		1	25	16.09	0.0406	19.59	0.0910
Highest		1	25	16.10	0.0407	19.60	0.0912
Lowest	256QAM	25	12	14.44	0.0278	17.94	0.0622
Middle		25	12	13.50	0.0224	17.00	0.0501
Highest		25	12	13.30	0.0214	16.80	0.0479



LTE Band 48 / 15MHz (Average) (GT - LC = 3.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	74	19.35	0.0861	22.85	0.1928
Middle		1	74	18.45	0.0700	21.95	0.1567
Highest		1	74	18.22	0.0664	21.72	0.1486
Lowest	16QAM	1	0	18.46	0.0701	21.96	0.1570
Middle		1	0	17.55	0.0569	21.05	0.1274
Highest		1	0	17.53	0.0566	21.03	0.1268
Lowest	64QAM	1	0	17.09	0.0512	20.59	0.1146
Middle		1	0	16.18	0.0415	19.68	0.0929
Highest		1	0	16.11	0.0408	19.61	0.0914
Lowest	256QAM	36	20	14.42	0.0277	17.92	0.0619
Middle		36	20	13.48	0.0223	16.98	0.0499
Highest		36	20	13.36	0.0217	16.86	0.0485

LTE Band 48 / 20MHz (Average) (GT - LC = 3.5 dB)							
Channel	Mode	RB		Conducted		EIRP	
		Size	Offset	Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	19.37	0.0865	22.87	0.1936
Middle		1	0	18.54	0.0714	22.04	0.1600
Highest		1	0	18.52	0.0711	22.02	0.1592
Lowest	16QAM	1	0	18.46	0.0701	21.96	0.1570
Middle		1	0	17.64	0.0581	21.14	0.1300
Highest		1	0	17.58	0.0573	21.08	0.1282
Lowest	64QAM	1	49	17.10	0.0513	20.60	0.1148
Middle		1	49	16.12	0.0409	19.62	0.0916
Highest		1	49	16.12	0.0409	19.62	0.0916
Lowest	256QAM	50	24	14.49	0.0281	17.99	0.0630
Middle		50	24	13.55	0.0226	17.05	0.0507
Highest		50	24	13.38	0.0218	16.88	0.0488



EIRP

LTE Band 48 / Conducted Power (dBm/10MHz)									
BW	1.4MHz			3MHz			5MHz		
Mod.	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Lowest CH	-	-	-	-	-	-	19.27	18.40	17.07
Middle CH	-	-	-	-	-	-	18.37	17.51	16.08
Highest CH	-	-	-	-	-	-	18.38	17.33	16.11
BW	1.4MHz			3MHz			5MHz		
Mod.	256QAM			256QAM			256QAM		
Lowest CH	-	-	-	-	-	-	13.95	-	-
Middle CH	-	-	-	-	-	-	14.00	-	-
Highest CH	-	-	-	-	-	-	14.13	-	-
LTE Band 48 / Conducted Power (dBm/10MHz)									
BW	10MHz			15MHz			20MHz		
Mod.	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Lowest CH	19.32	18.46	17.05	19.35	18.46	17.09	19.37	18.46	17.10
Middle CH	18.44	17.64	16.09	18.45	17.55	16.18	18.54	17.64	16.12
Highest CH	18.35	17.48	16.10	18.22	17.53	16.11	18.52	17.58	16.12
BW	10MHz			15MHz			20MHz		
Mod.	256QAM			256QAM			256QAM		
Lowest CH	13.90	-	-	13.91	-	-	13.99	-	-
Middle CH	14.02	-	-	14.08	-	-	14.12	-	-
Highest CH	14.09	-	-	14.12	-	-	14.19	-	-

LTE Band 48 / EIRP Power (dBm/10MHz)									
BW	1.4MHz			3MHz			5MHz		
Mod.	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Lowest CH	-	-	-	-	-	-	22.77	21.90	20.57
Middle CH	-	-	-	-	-	-	21.87	21.01	19.58
Highest CH	-	-	-	-	-	-	21.88	20.83	19.61
BW	1.4MHz			3MHz			5MHz		
Mod.	256QAM			256QAM			256QAM		
Lowest CH	-	-	-	-	-	-	17.96	-	-
Middle CH	-	-	-	-	-	-	17.00	-	-
Highest CH	-	-	-	-	-	-	16.82	-	-
LTE Band 48 / EIRP Power (dBm/10MHz)									
BW	10MHz			15MHz			20MHz		
Mod.	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
Lowest CH	22.82	21.96	20.55	22.85	21.96	20.59	22.87	21.96	20.60
Middle CH	21.94	21.14	19.59	21.95	21.05	19.68	22.04	21.14	19.62
Highest CH	21.85	20.98	19.60	21.72	21.03	19.61	22.02	21.08	19.62
BW	10MHz			15MHz			20MHz		
Mod.	256QAM			256QAM			256QAM		
Lowest CH	17.94	-	-	17.92	-	-	17.99	-	-
Middle CH	17.00	-	-	16.98	-	-	17.05	-	-
Highest CH	16.80	-	-	16.86	-	-	16.88	-	-
Antenna Gain	3.5 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	7100	-58.49	-40	-18.49	-60.46	-68.46	1.77	11.74	H
	10653	-57.98	-40	-17.98	-60.25	-66.41	2.47	10.90	H
	14205	-56.72	-40	-16.72	-63.78	-65.56	2.87	11.71	H
	21306	-51.63	-40	-11.63	-73.49	-68.35	1.98	18.70	H
	24857	-53.58	-40	-13.58	-78.24	-69.59	2.07	18.07	H
	28408	-52.64	-40	-12.64	-78.16	-69.88	2.32	19.56	H
	7100	-58.27	-40	-18.27	-59.85	-68.24	1.77	11.74	V
	10653	-58.08	-40	-18.08	-60.1	-66.51	2.47	10.90	V
	14205	-56.92	-40	-16.92	-63.7	-65.76	2.87	11.71	V
	21306	-48.38	-40	-8.38	-70.1	-65.10	1.98	18.70	V
	24857	-51.56	-40	-11.56	-77.43	-67.57	2.07	18.07	V
	28408	-49.94	-40	-9.94	-77.28	-67.18	2.32	19.56	V
Middle	7232	-58.24	-40	-18.24	-60.62	-67.92	1.85	11.53	H
	10848	-58.27	-40	-18.27	-60.6	-66.60	2.57	10.90	H
	14464	-57.04	-40	-17.04	-64.31	-65.27	2.85	11.09	H
	18080	-54.48	-40	-14.48	-72.59	-70.71	1.76	17.98	H
	21696	-53.64	-40	-13.64	-75.16	-70.43	1.99	18.78	H
	25312	-52.72	-40	-12.72	-77.88	-69.32	2.14	18.74	H
	7232	-58.04	-40	-18.04	-60.15	-67.72	1.85	11.53	V
	10848	-58.63	-40	-18.63	-60.75	-66.96	2.57	10.90	V
	14464	-57.70	-40	-17.70	-64.14	-65.93	2.85	11.09	V
	18080	-55.71	-40	-15.71	-72.89	-71.94	1.76	17.98	V
	21696	-47.18	-40	-7.18	-68.69	-63.97	1.99	18.78	V
	25312	-50.68	-40	-10.68	-77.1	-67.28	2.14	18.74	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	7362	-58.83	-40	-18.83	-61.16	-68.24	1.92	11.32	H
	11043	-58.62	-40	-18.62	-61.09	-66.94	2.63	10.95	H
	14724	-56.88	-40	-16.88	-65.72	-65.68	2.91	11.72	H
	18405	-53.85	-40	-13.85	-72.17	-69.90	1.87	17.92	H
	22086	-51.73	-40	-11.73	-73.9	-68.52	2.08	18.87	H
	25767	-51.96	-40	-11.96	-77.95	-68.98	2.03	19.05	H
	7362	-58.50	-40	-18.50	-60.65	-67.91	1.92	11.32	V
	11043	-58.81	-40	-18.81	-61.12	-67.13	2.63	10.95	V
	14724	-56.32	-40	-16.32	-63.49	-65.12	2.91	11.72	V
	18405	-55.51	-40	-15.51	-72.95	-71.56	1.87	17.92	V
	22086	-52.65	-40	-12.65	-74.82	-69.44	2.08	18.87	V
	25767	-50.91	-40	-10.91	-78.09	-67.93	2.03	19.05	V

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