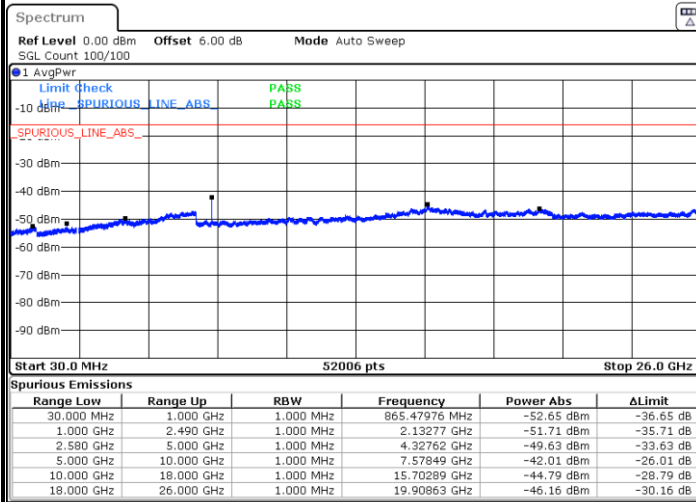




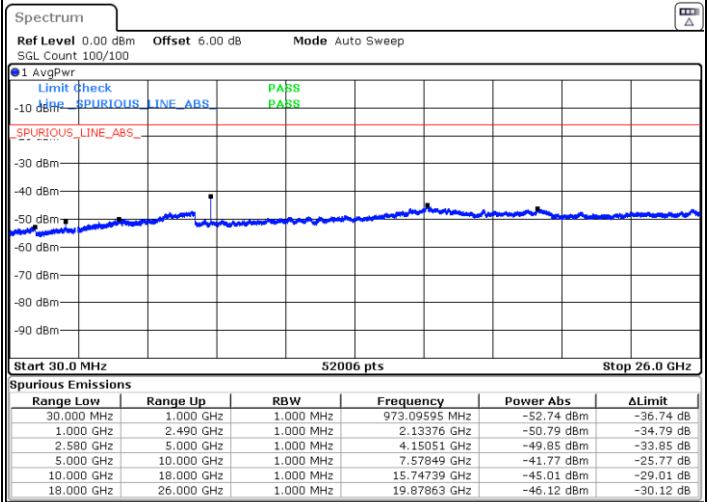
LTE Band 7 / 20MHz

Middle Channel / QPSK



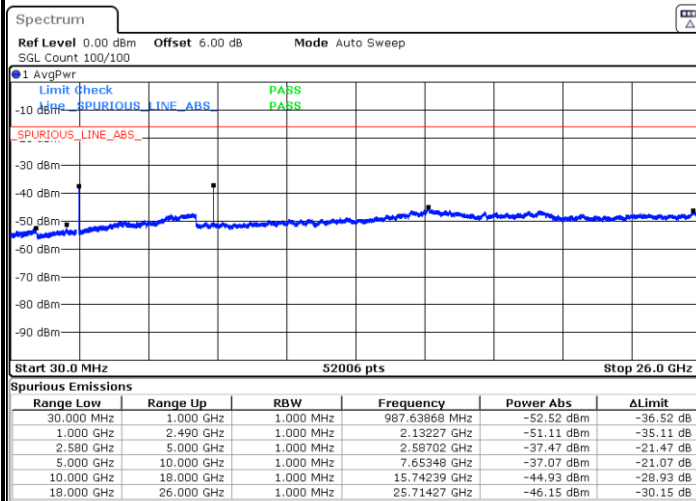
Date: 18 DEC 2019 06:04:02

Middle Channel / 16QAM



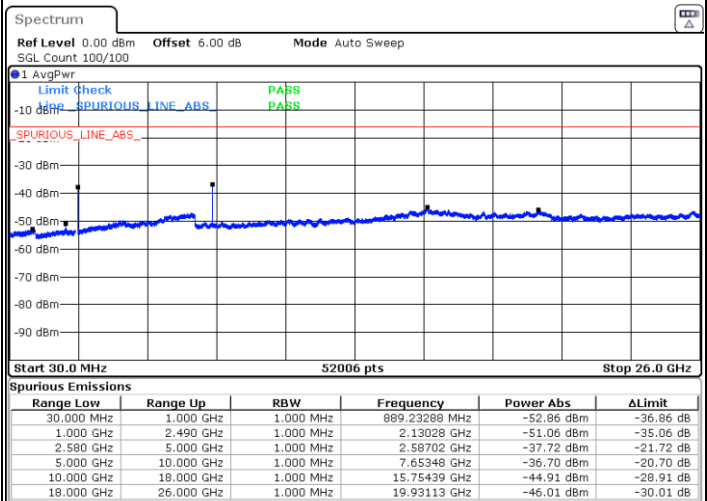
Date: 18 DEC 2019 06:05:08

Highest Channel / QPSK



Date: 18 DEC 2019 06:10:14

Highest Channel / 16QAM

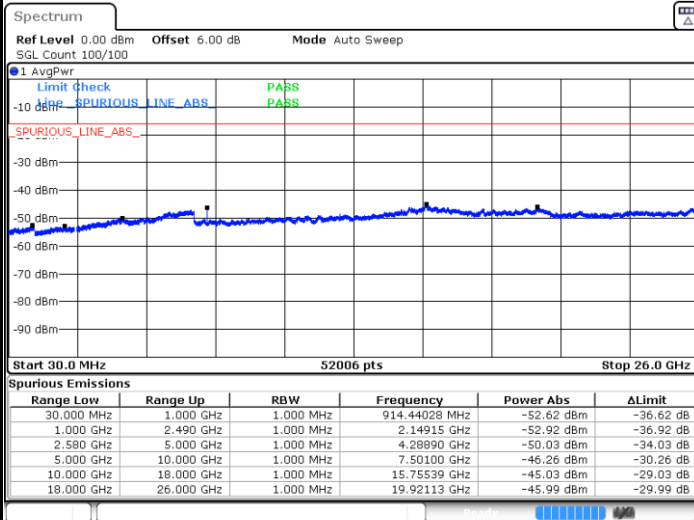


Date: 18 DEC 2019 06:11:14



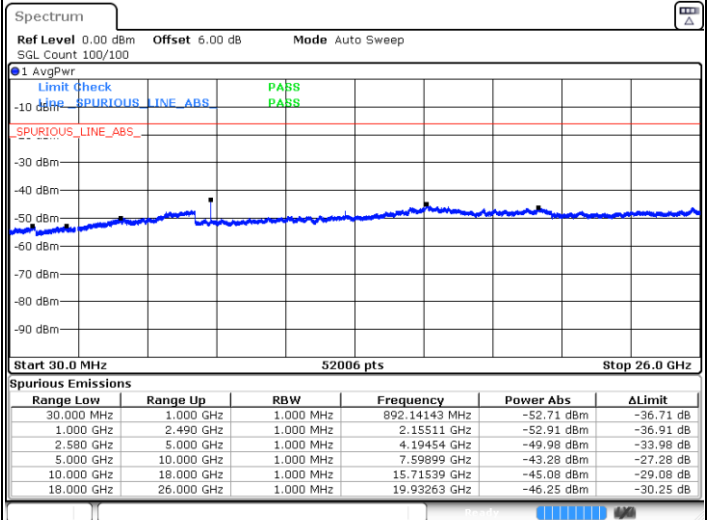
LTE Band 7 / 5MHz

Lowest Channel / 64QAM



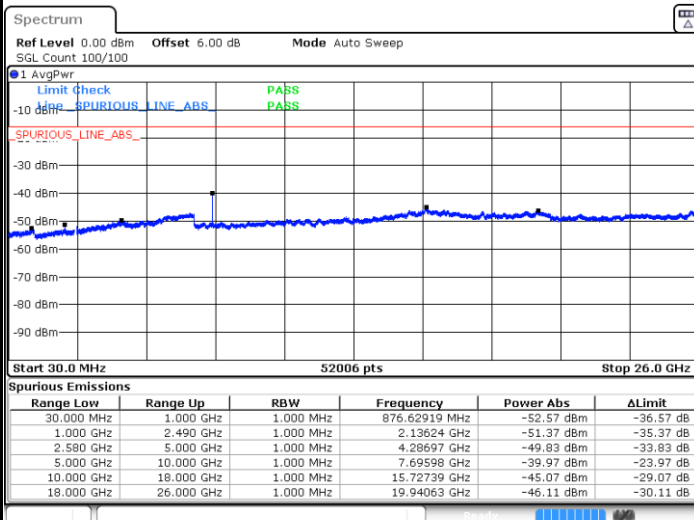
Date: 18 DEC 2019 02:32:42

Middle Channel / 64QAM



Date: 18 DEC 2019 02:36:44

Highest Channel / 64QAM

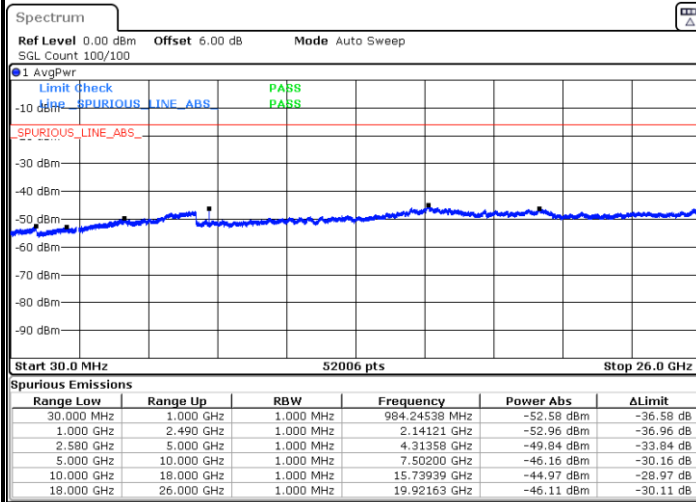


Date: 18 DEC 2019 02:43:30



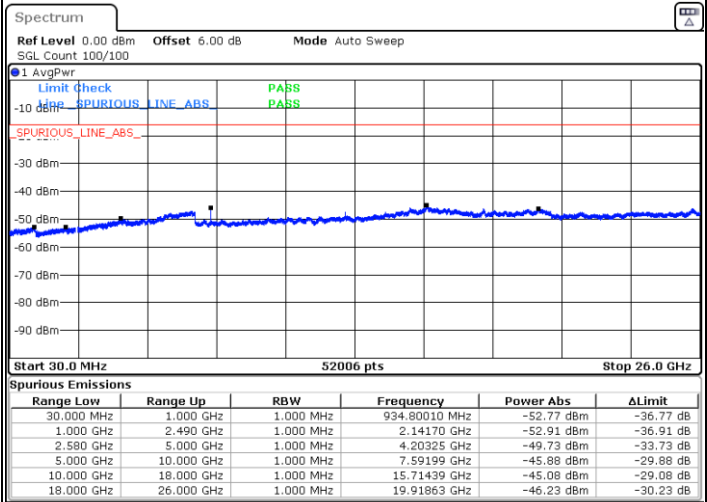
LTE Band 7 / 10MHz

Lowest Channel / 64QAM



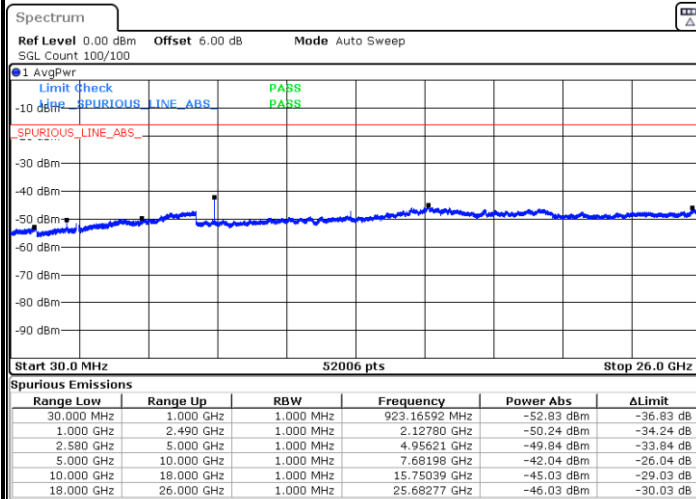
Date: 18 DEC 2019 04:51:38

Middle Channel / 64QAM



Date: 18 DEC 2019 04:56:51

Highest Channel / 64QAM

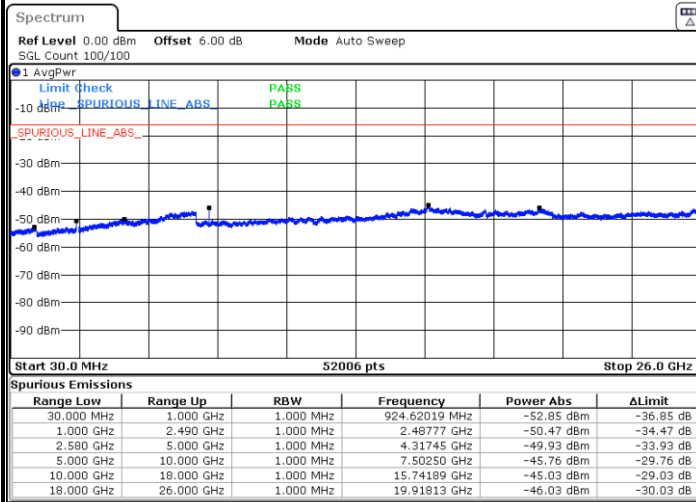


Date: 18 DEC 2019 05:02:42



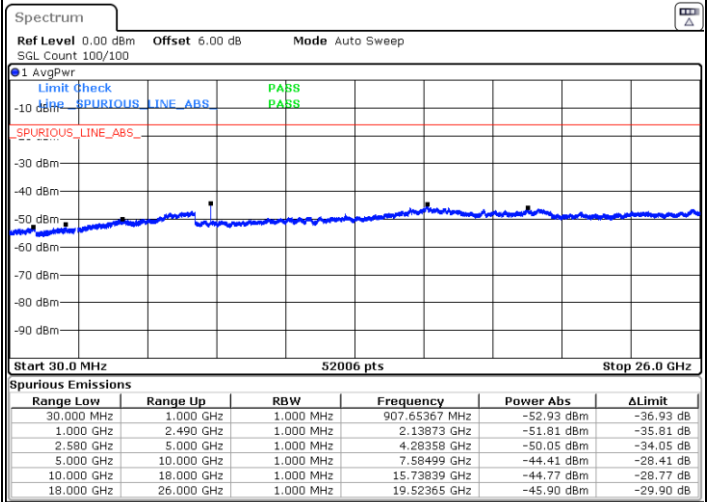
LTE Band 7 / 15MHz

Lowest Channel / 64QAM



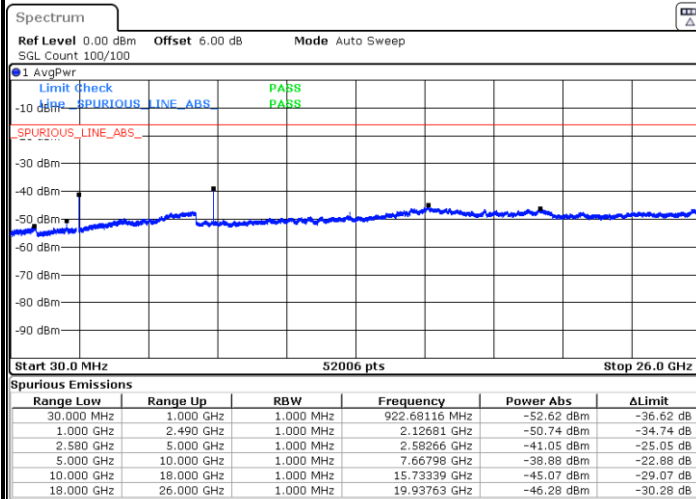
Date: 18 DEC 2019 05:39:07

Middle Channel / 64QAM



Date: 18 DEC 2019 05:46:08

Highest Channel / 64QAM

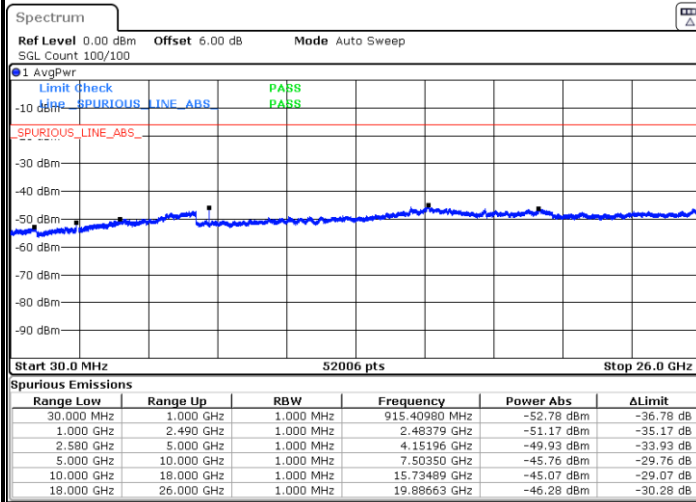


Date: 18 DEC 2019 05:51:18



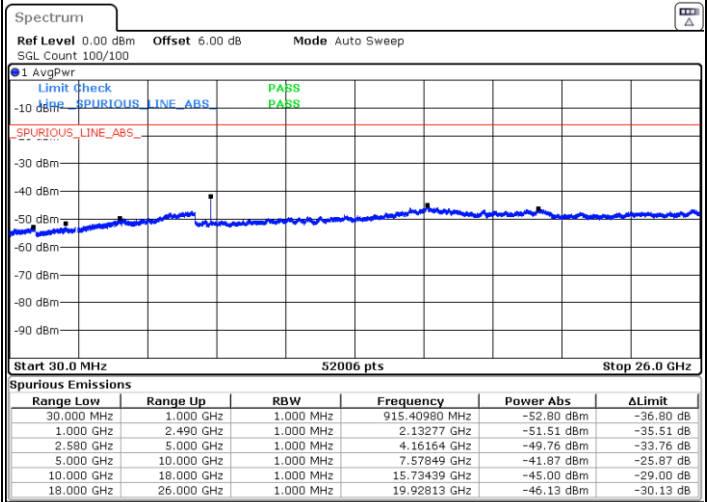
LTE Band 7 / 20MHz

Lowest Channel / 64QAM



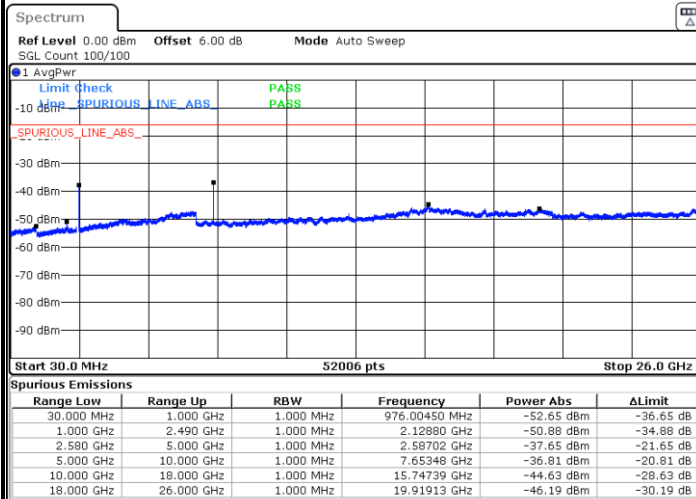
Date: 18 DEC 2019 05:59:43

Middle Channel / 64QAM



Date: 18 DEC 2019 06:06:13

Highest Channel / 64QAM

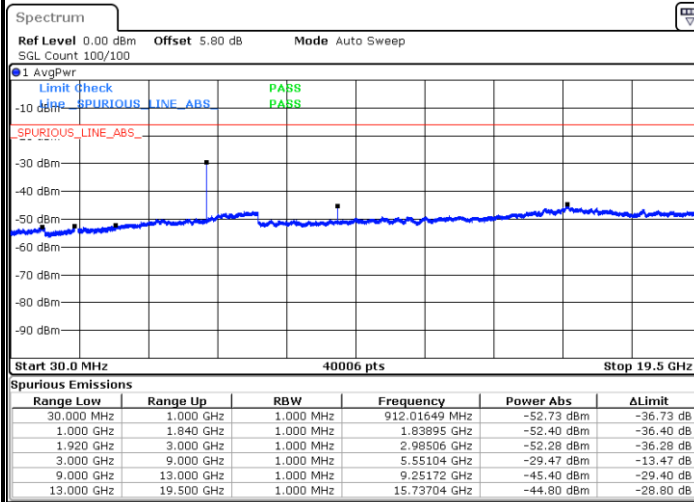


Date: 18 DEC 2019 06:12:13



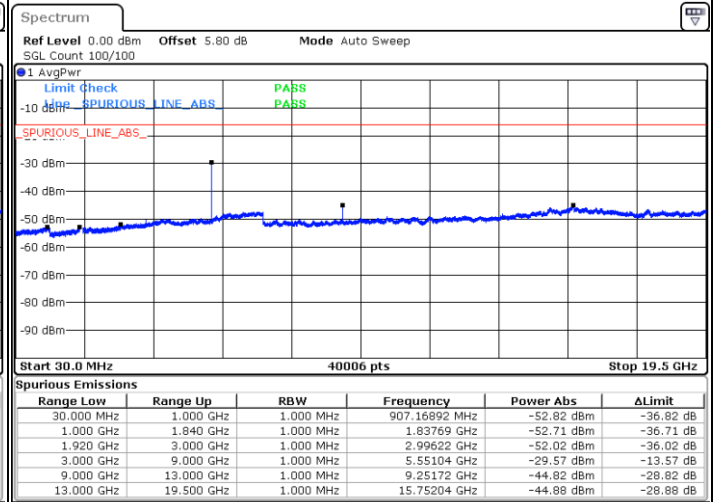
LTE Band 25 / 1.4MHz

Lowest Channel / QPSK



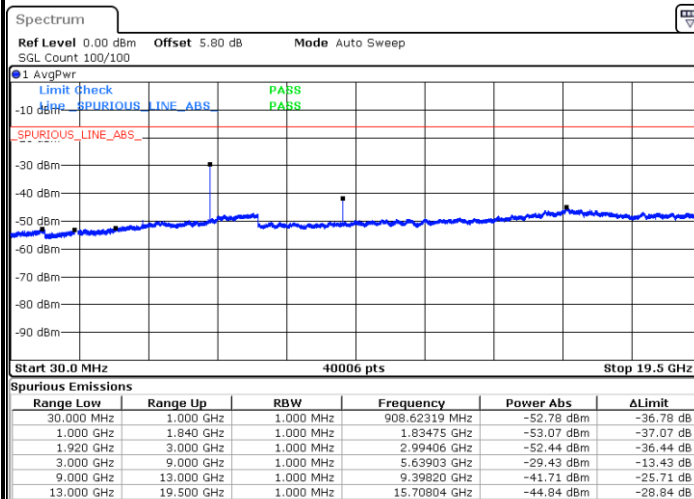
Date: 10 DEC 2019 00:41:58

Lowest Channel / 16QAM



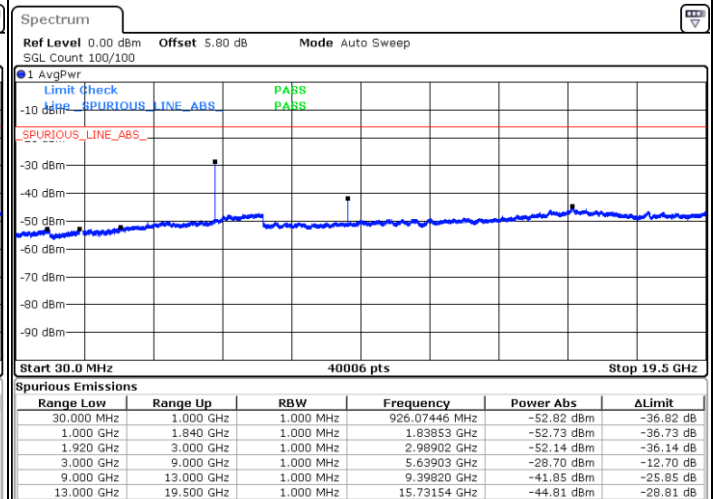
Date: 10 DEC 2019 00:44:08

Middle Channel / QPSK



Date: 10 DEC 2019 00:49:01

Middle Channel / 16QAM

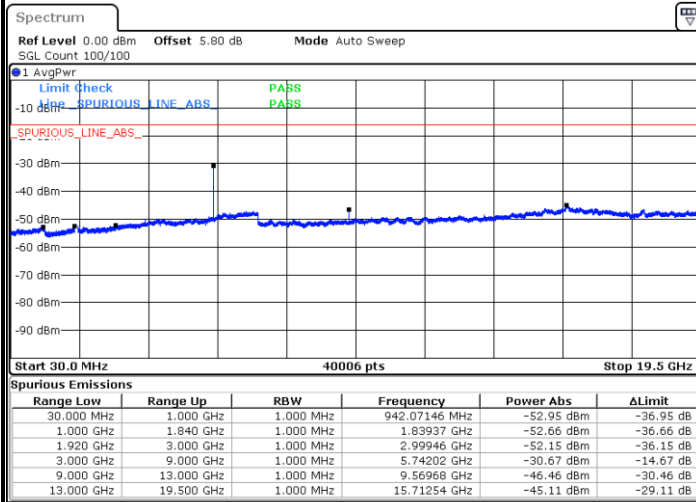


Date: 10 DEC 2019 00:49:57



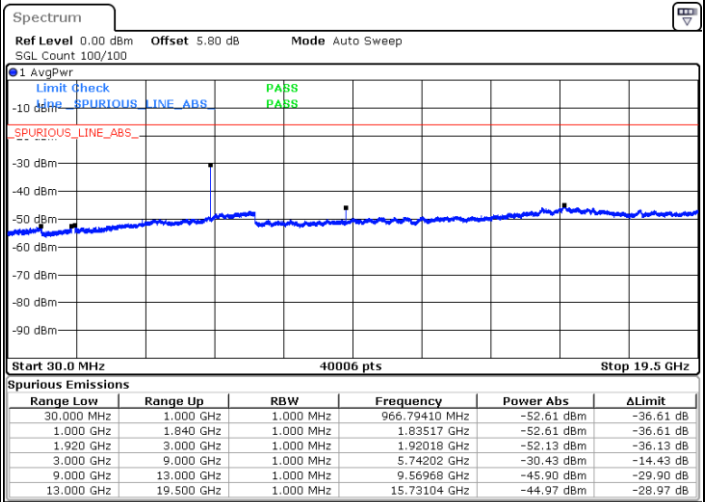
LTE Band 25 / 1.4MHz

Highest Channel / QPSK



Date: 10 DEC 2019 00:53:51

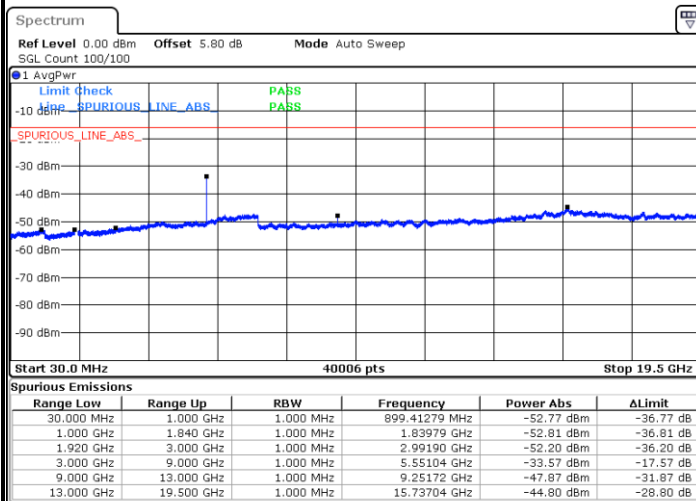
Highest Channel / 16QAM



Date: 10 DEC 2019 00:54:41

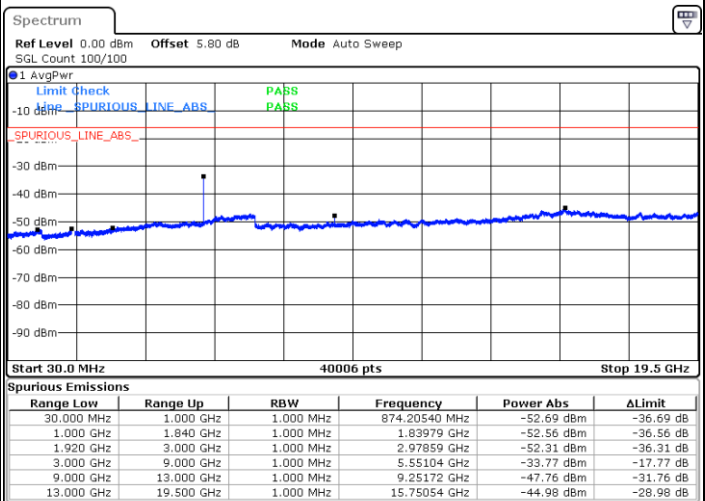
LTE Band 25 / 3MHz

Lowest Channel / QPSK



Date: 10 DEC 2019 01:00:49

Lowest Channel / 16QAM

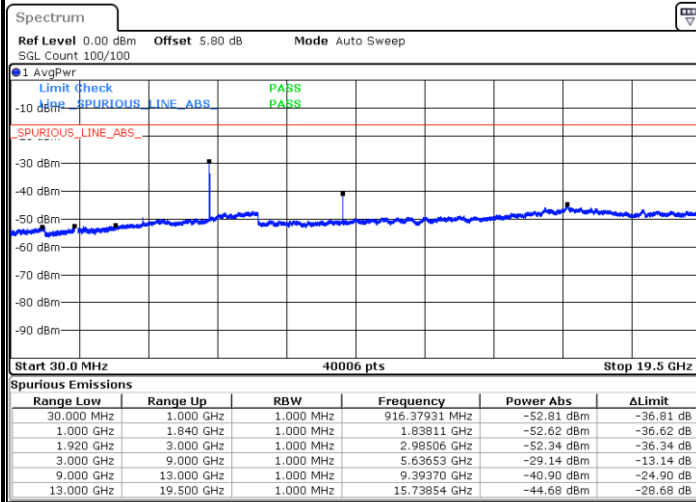


Date: 10 DEC 2019 01:01:30



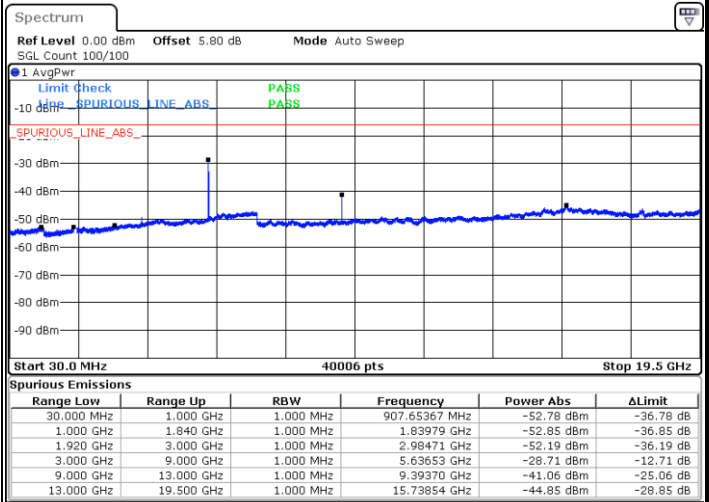
LTE Band 25 / 3MHz

Middle Channel / QPSK



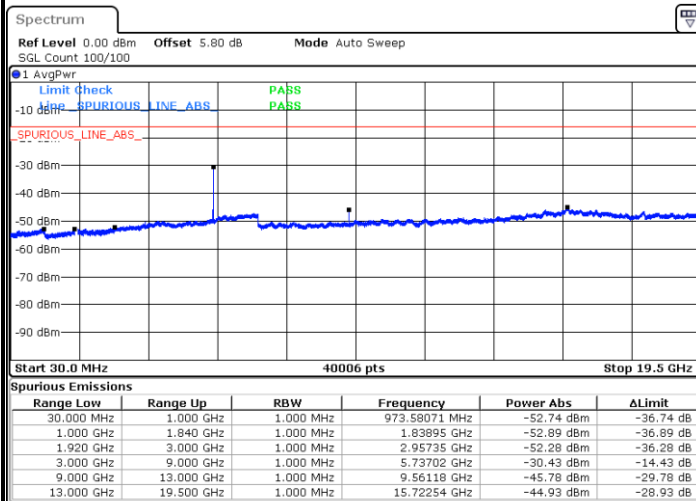
Date: 10 DEC 2019 01:05:03

Middle Channel / 16QAM



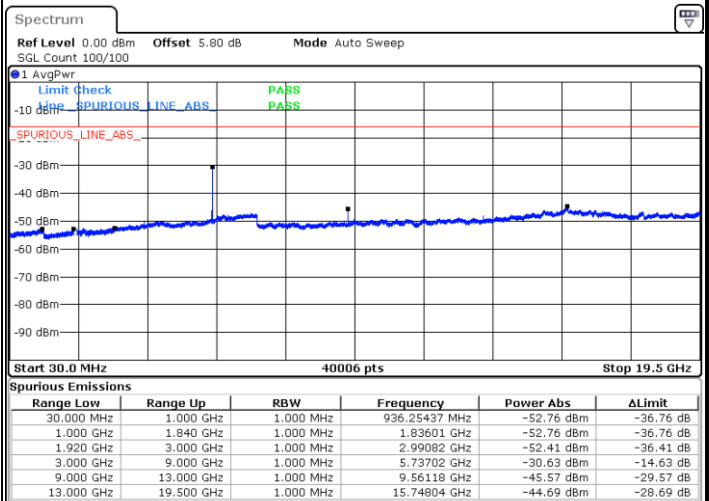
Date: 10 DEC 2019 01:05:45

Highest Channel / QPSK



Date: 10 DEC 2019 01:09:37

Highest Channel / 16QAM

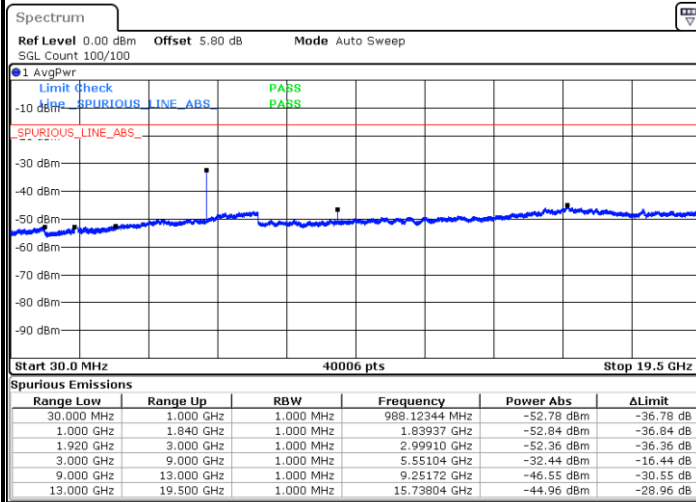


Date: 10 DEC 2019 01:10:18



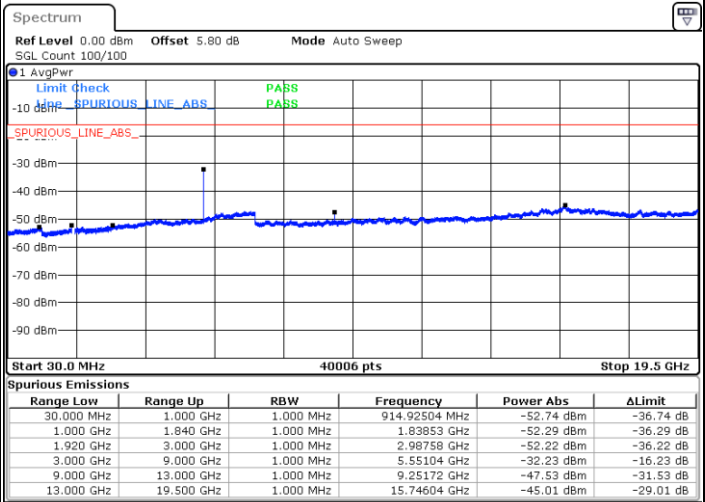
LTE Band 25 / 5MHz

Lowest Channel / QPSK



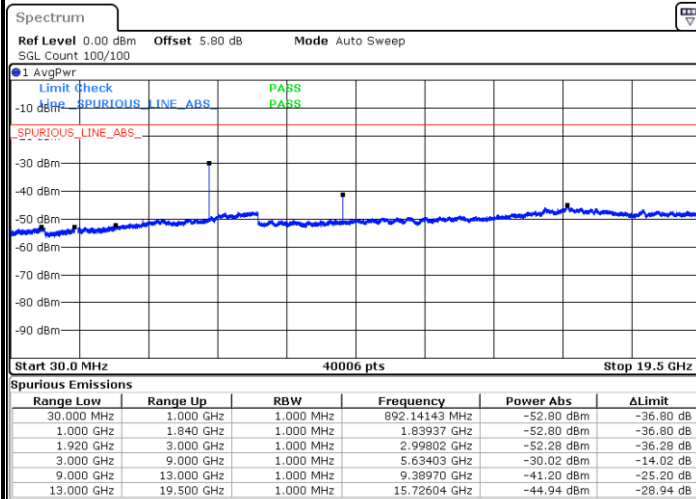
Date: 10 DEC 2019 01:20:20

Lowest Channel / 16QAM



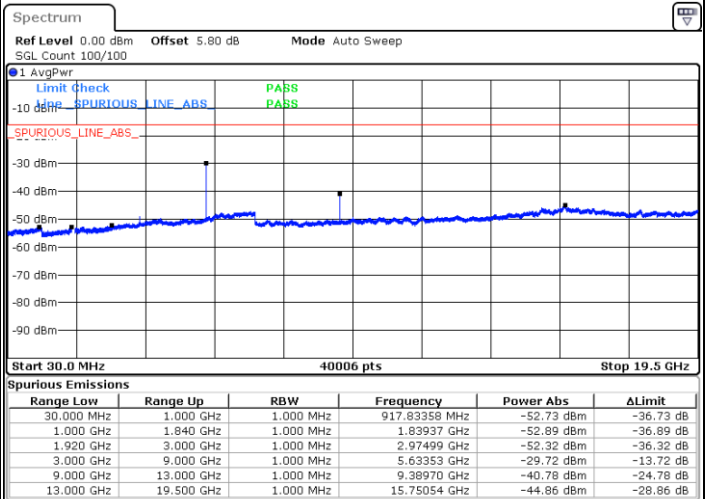
Date: 10 DEC 2019 01:22:56

Middle Channel / QPSK



Date: 10 DEC 2019 01:27:25

Middle Channel / 16QAM

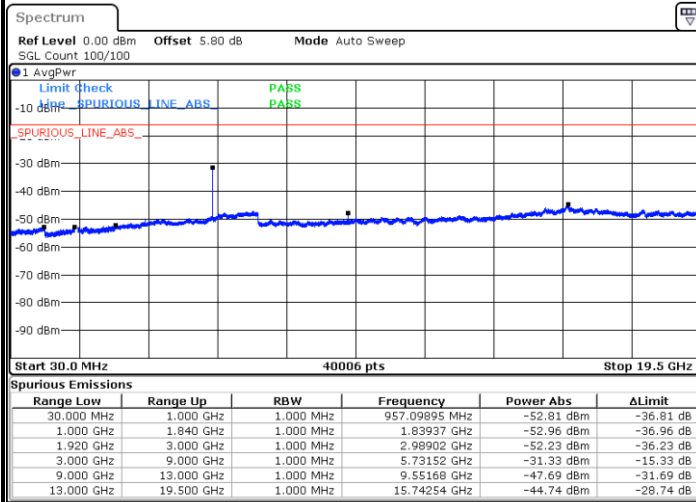


Date: 10 DEC 2019 01:28:09



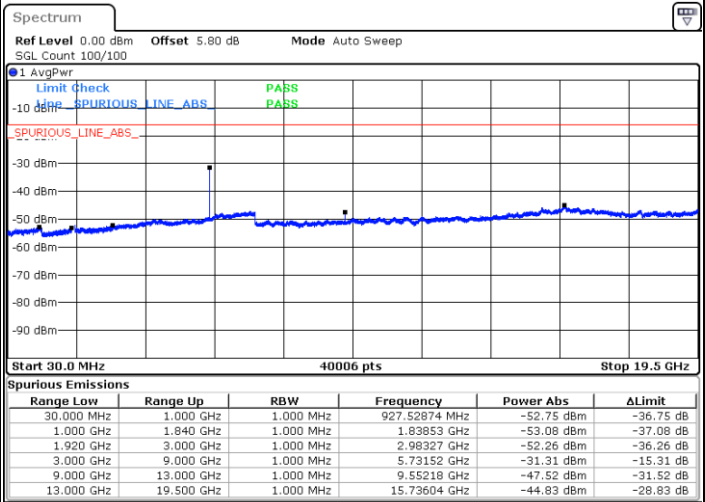
LTE Band 25 / 5MHz

Highest Channel / QPSK



Date: 10 DEC 2019 01:34:27

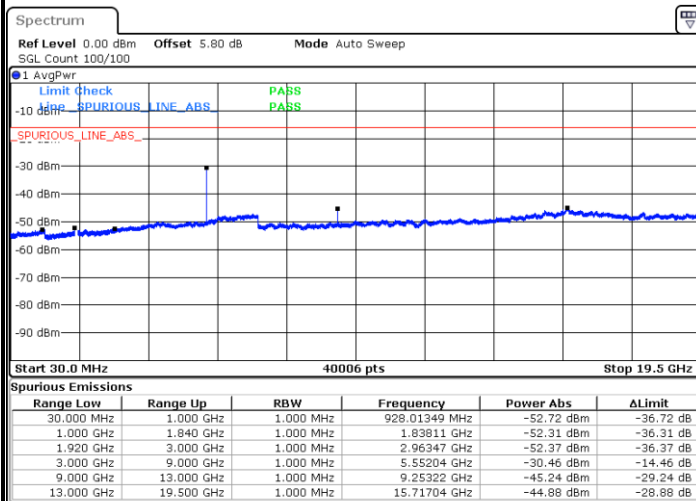
Highest Channel / 16QAM



Date: 10 DEC 2019 01:35:21

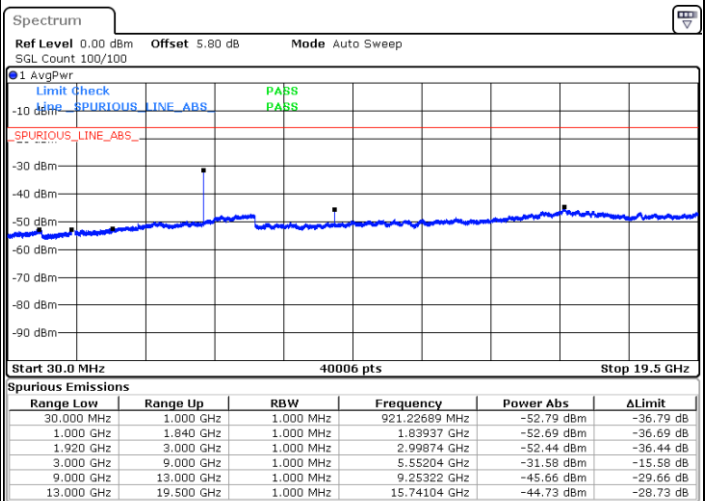
LTE Band 25 / 10MHz

Lowest Channel / QPSK



Date: 10 DEC 2019 01:39:11

Lowest Channel / 16QAM

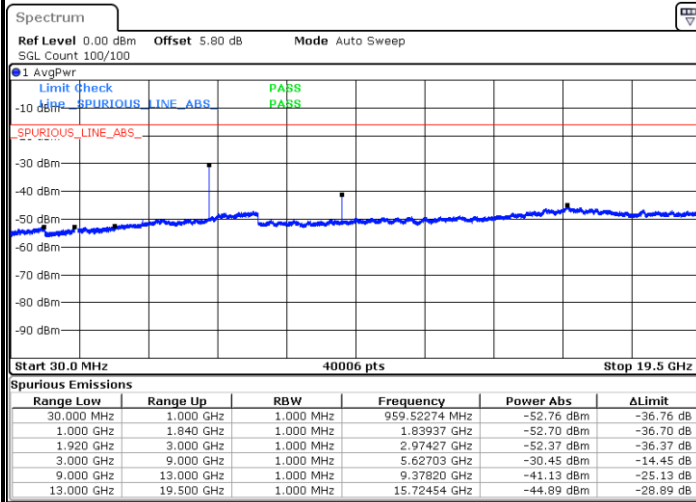


Date: 10 DEC 2019 01:39:51



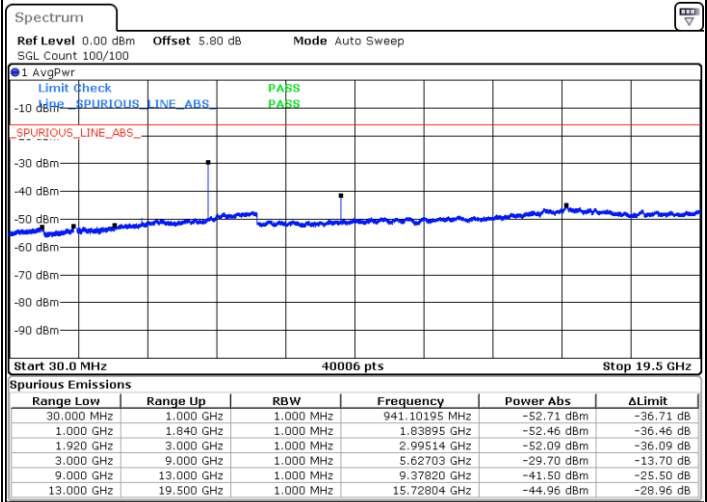
LTE Band 25 / 10MHz

Middle Channel / QPSK



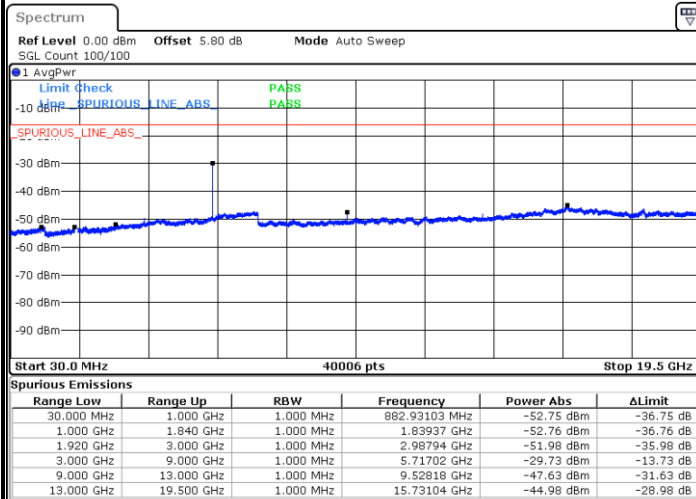
Date: 10 DEC 2019 01:44:16

Middle Channel / 16QAM



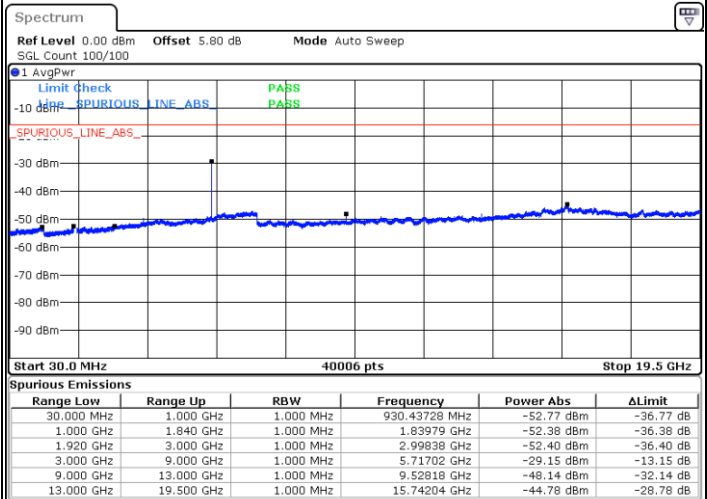
Date: 10 DEC 2019 01:45:02

Highest Channel / QPSK



Date: 10 DEC 2019 01:49:16

Highest Channel / 16QAM

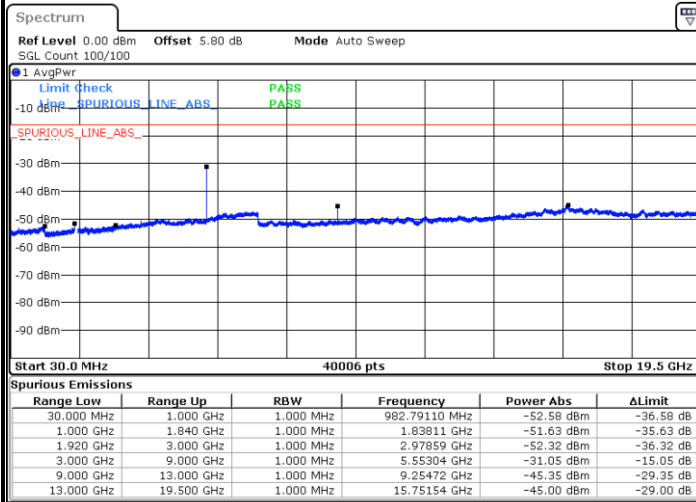


Date: 10 DEC 2019 01:49:56



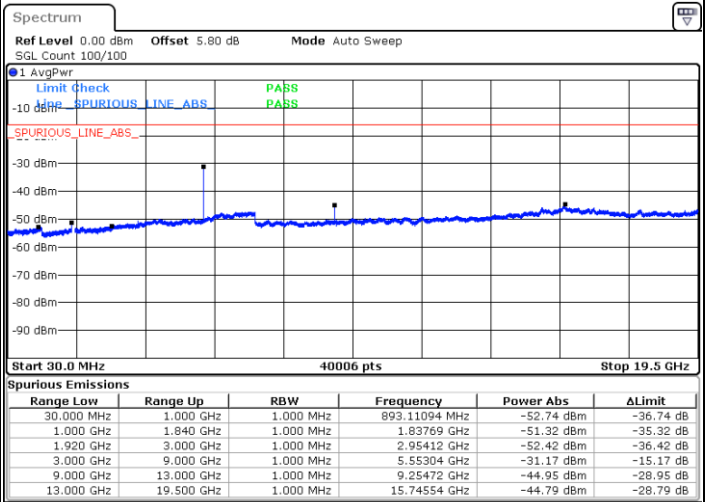
LTE Band 25 / 15MHz

Lowest Channel / QPSK



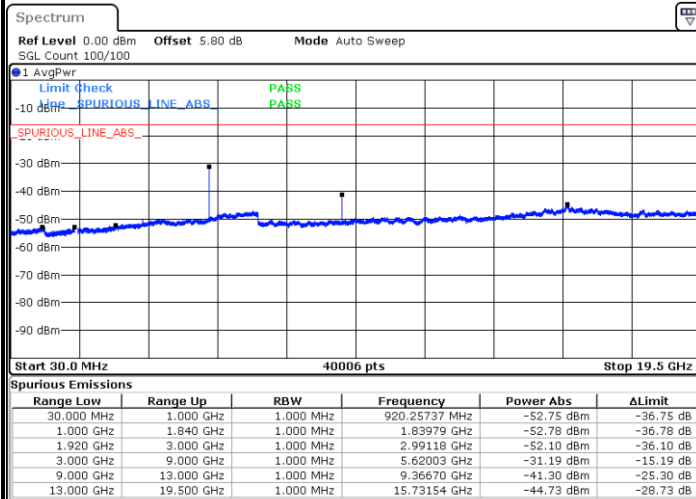
Date: 10 DEC 2019 01:53:46

Lowest Channel / 16QAM



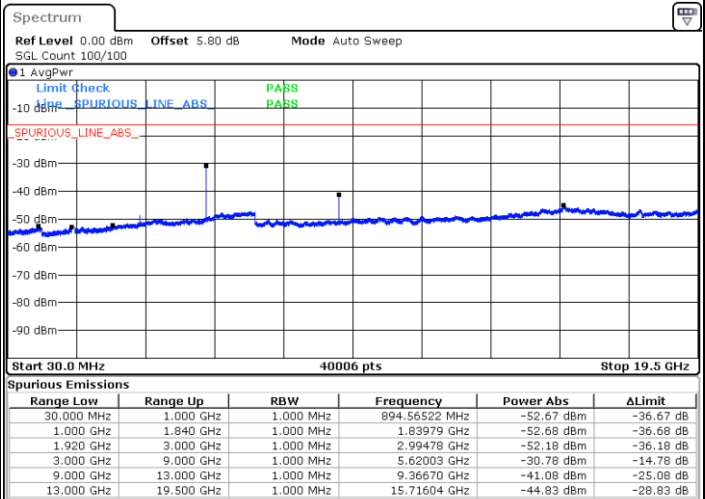
Date: 10 DEC 2019 01:54:46

Middle Channel / QPSK



Date: 10 DEC 2019 01:58:57

Middle Channel / 16QAM

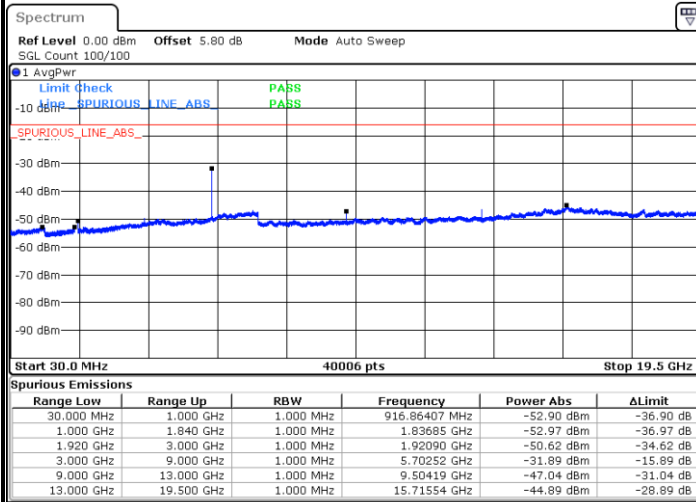


Date: 10 DEC 2019 01:59:46



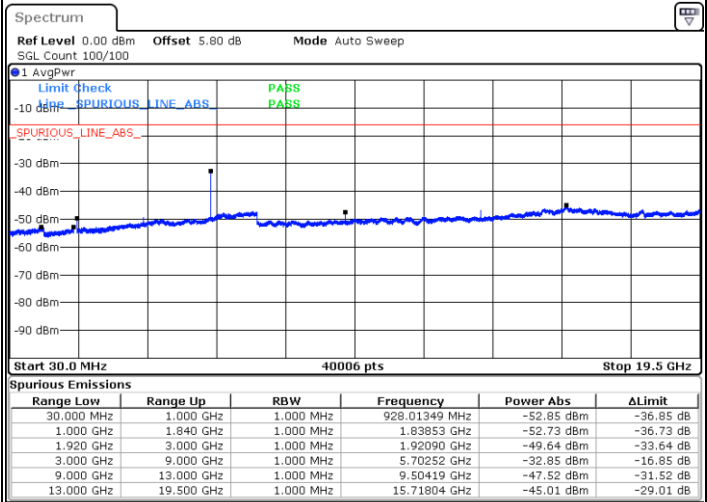
LTE Band 25 / 15MHz

Highest Channel / QPSK



Date: 10 DEC 2019 02:03:27

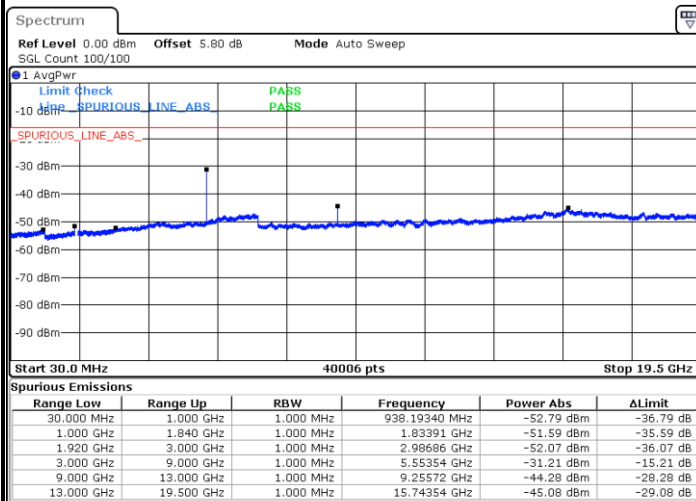
Highest Channel / 16QAM



Date: 10 DEC 2019 02:04:09

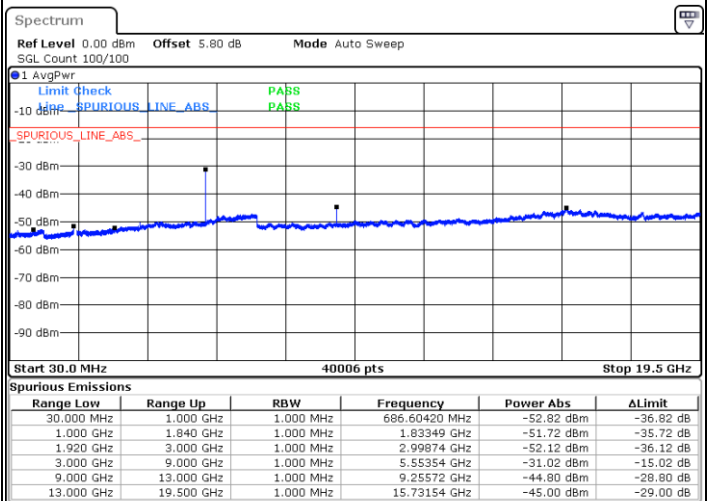
LTE Band 25 / 20MHz

Lowest Channel / QPSK



Date: 10 DEC 2019 02:08:07

Lowest Channel / 16QAM

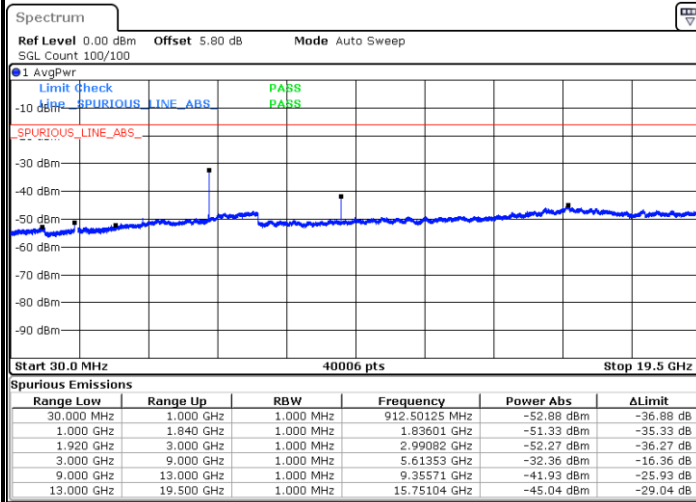


Date: 10 DEC 2019 02:09:02



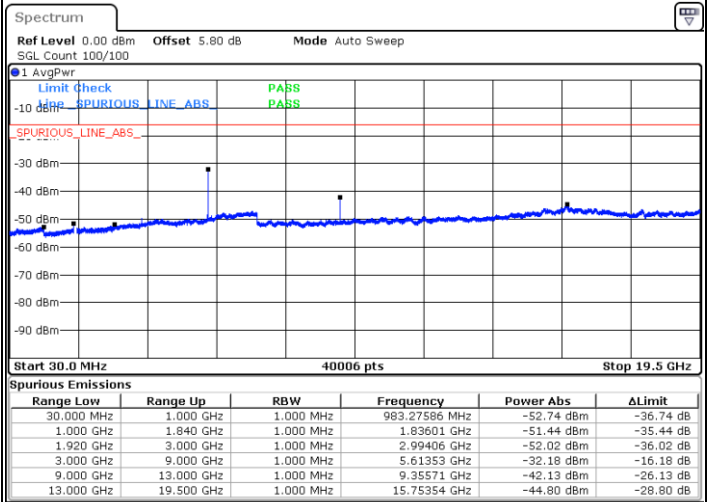
LTE Band 25 / 20MHz

Middle Channel / QPSK



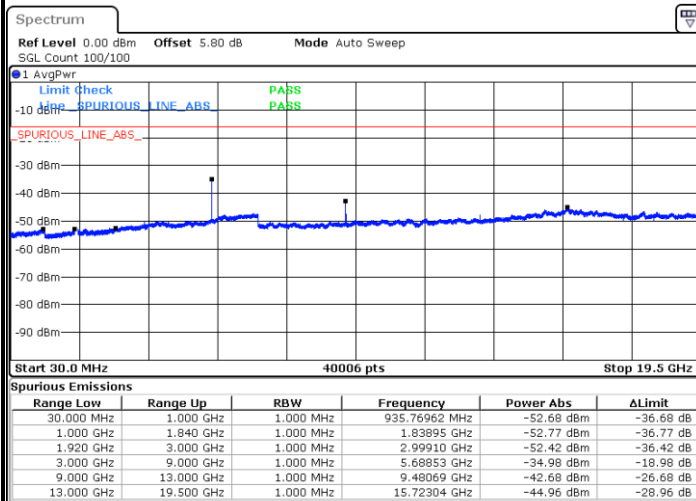
Date: 10 DEC 2019 02:26:56

Middle Channel / 16QAM



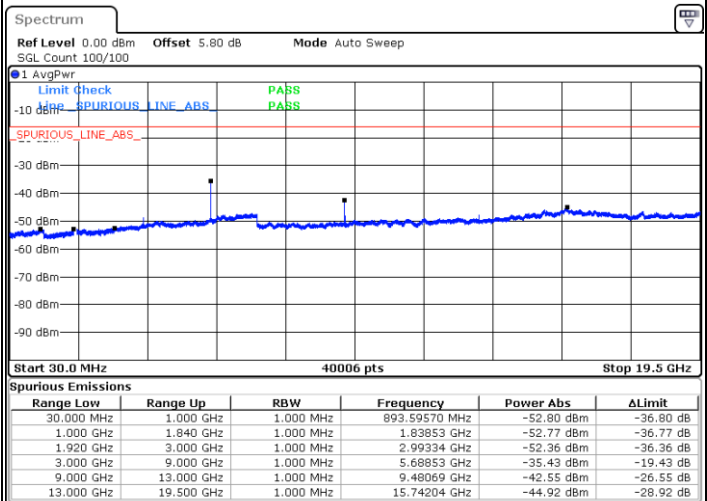
Date: 10 DEC 2019 02:27:59

Highest Channel / QPSK



Date: 10 DEC 2019 02:32:09

Highest Channel / 16QAM

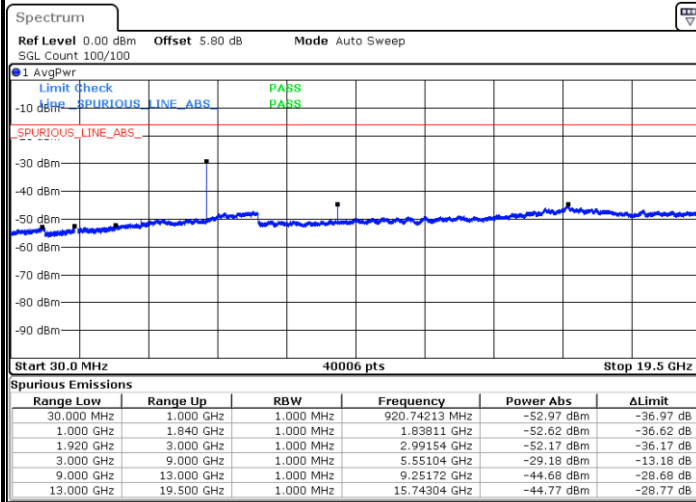


Date: 10 DEC 2019 02:33:13



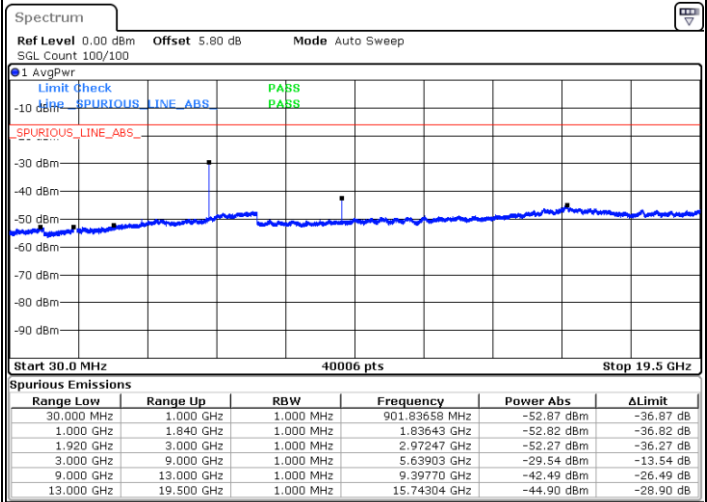
LTE Band 25 / 1.4MHz

Lowest Channel / 64QAM



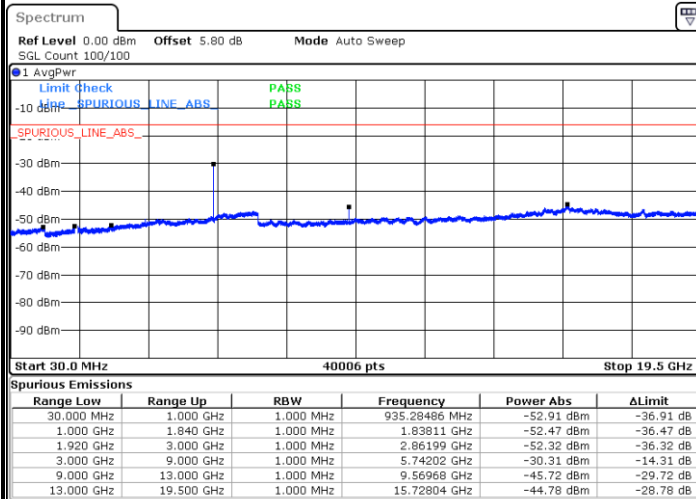
Date: 10 DEC 2019 00:44:54

Middle Channel / 64QAM



Date: 10 DEC 2019 00:50:47

Highest Channel / 64QAM

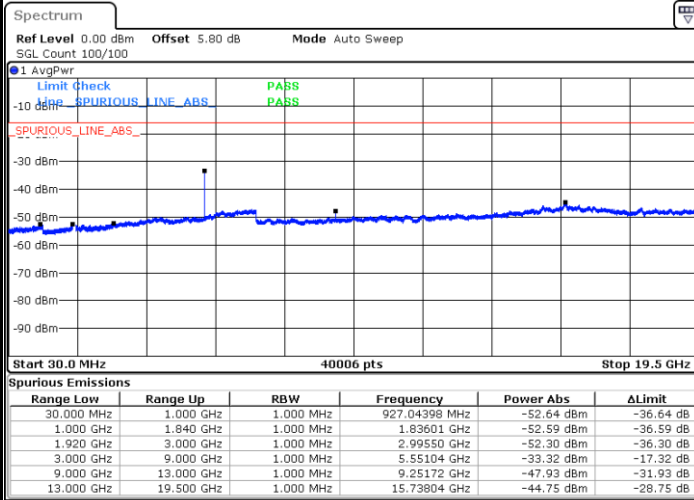


Date: 10 DEC 2019 00:55:27



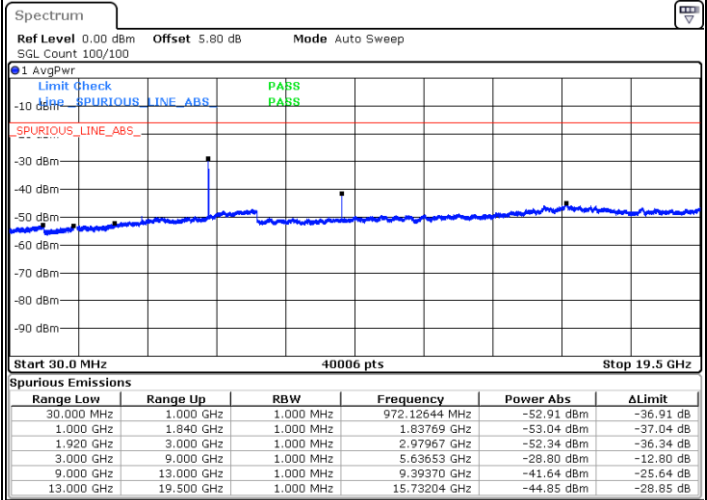
LTE Band 25 / 3MHz

Lowest Channel / 64QAM



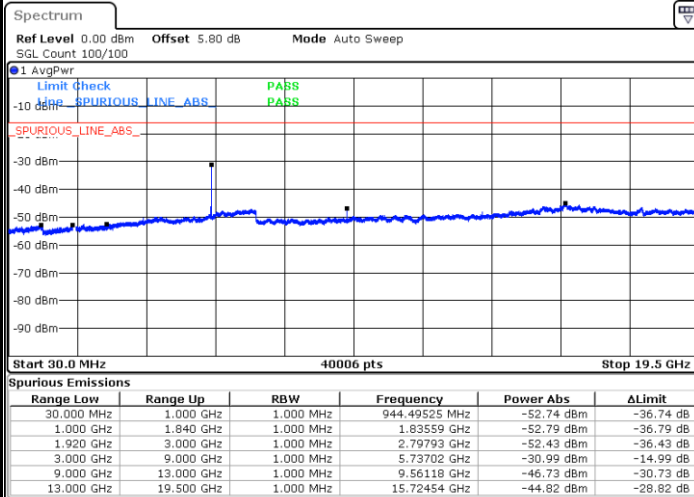
Date: 10 DEC 2019 01:02:24

Middle Channel / 64QAM



Date: 10 DEC 2019 01:06:30

Highest Channel / 64QAM

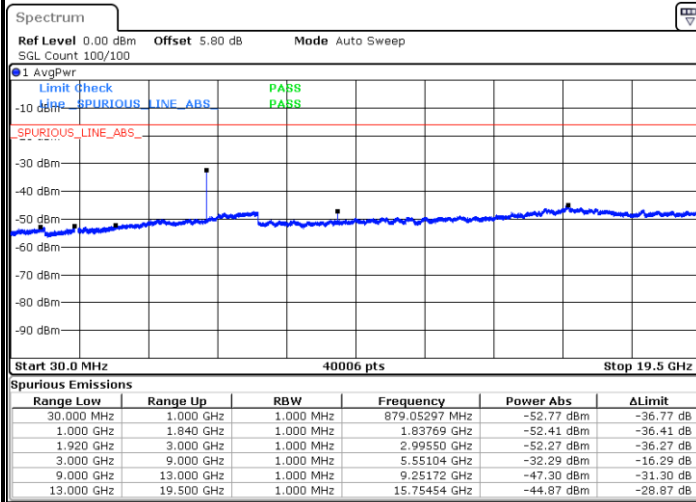


Date: 10 DEC 2019 01:11:07



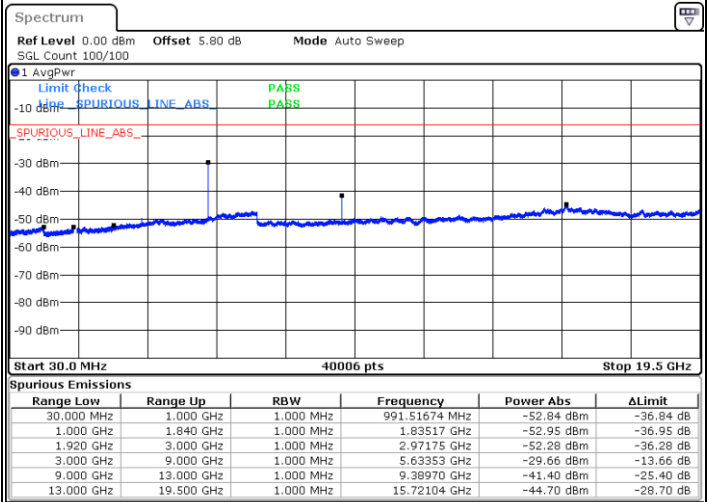
LTE Band 25 / 5MHz

Lowest Channel / 64QAM



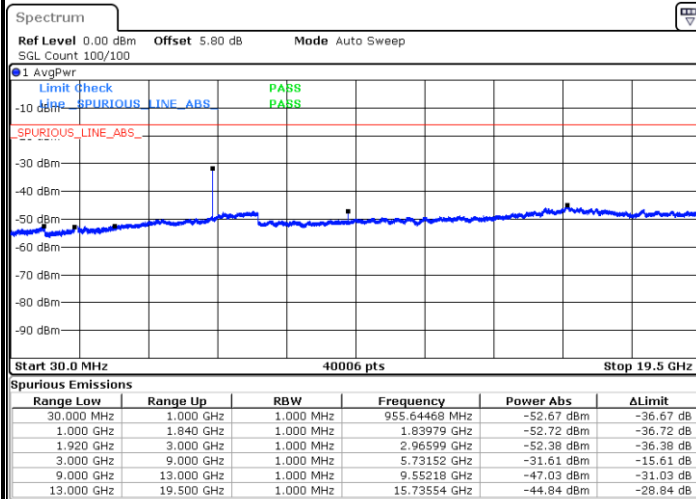
Date: 10 DEC 2019 01:23:45

Middle Channel / 64QAM



Date: 10 DEC 2019 01:28:53

Highest Channel / 64QAM

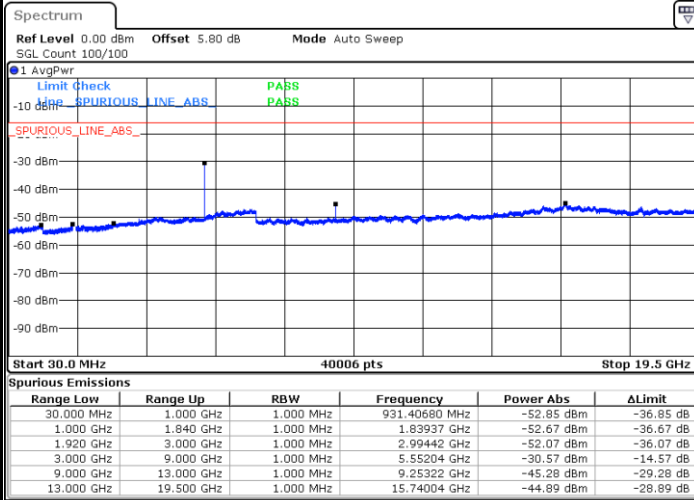


Date: 10 DEC 2019 01:36:07



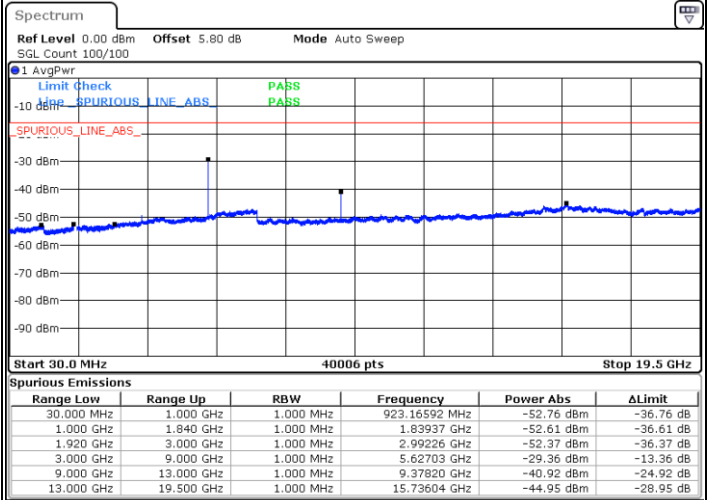
LTE Band 25 / 10MHz

Lowest Channel / 64QAM



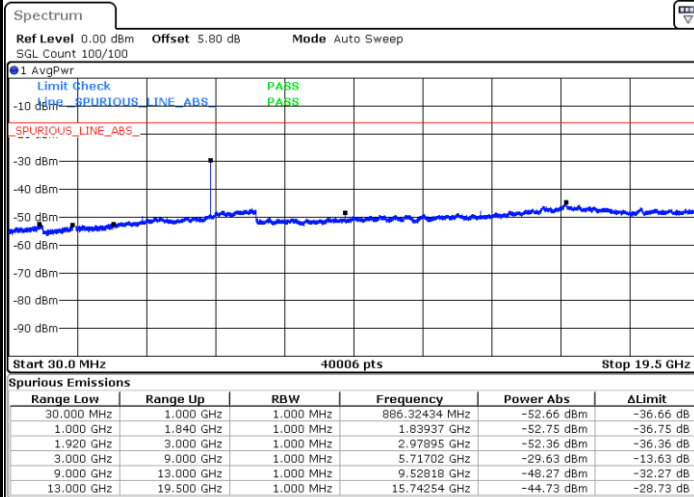
Date: 10 DEC 2019 01:40:44

Middle Channel / 64QAM



Date: 10 DEC 2019 01:45:45

Highest Channel / 64QAM

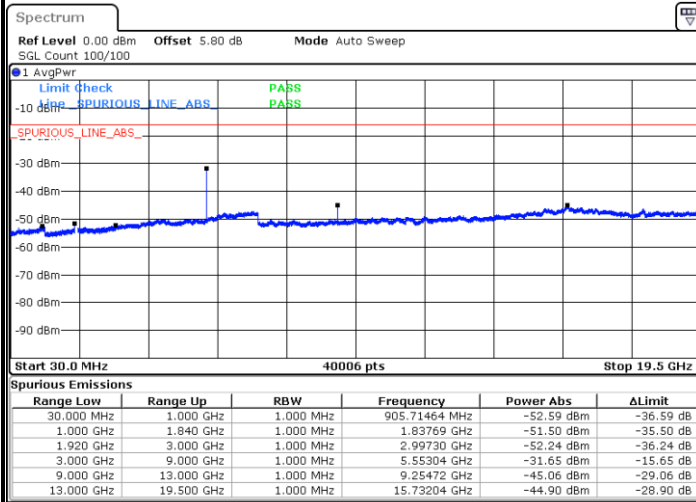


Date: 10 DEC 2019 01:50:57



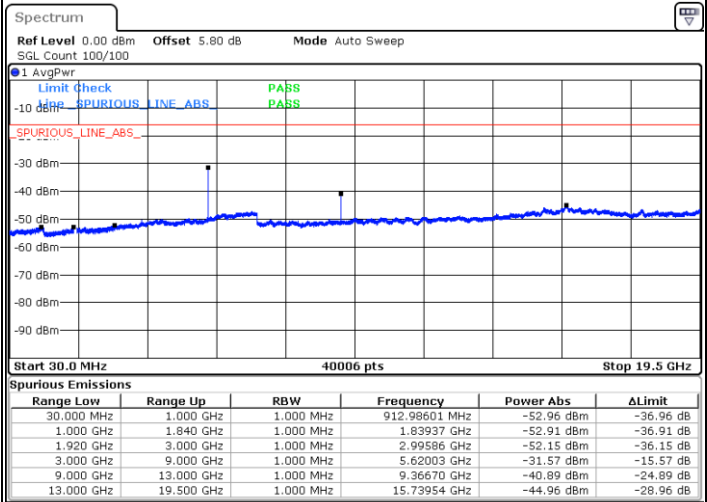
LTE Band 25 / 15MHz

Lowest Channel / 64QAM



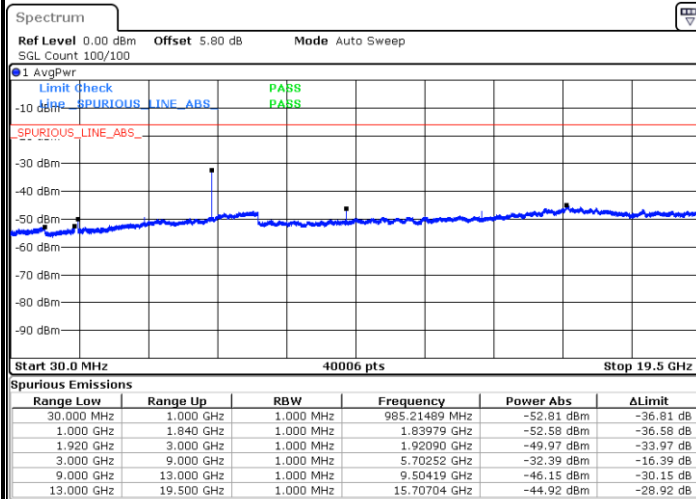
Date: 10 DEC 2019 01:55:36

Middle Channel / 64QAM



Date: 10 DEC 2019 02:00:31

Highest Channel / 64QAM

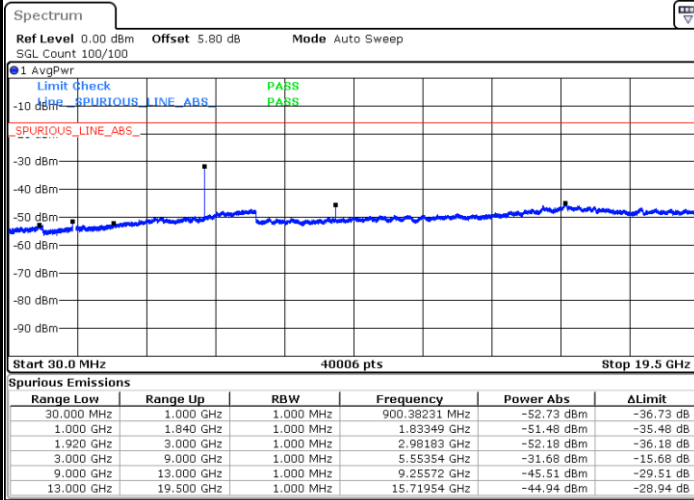


Date: 10 DEC 2019 02:04:49



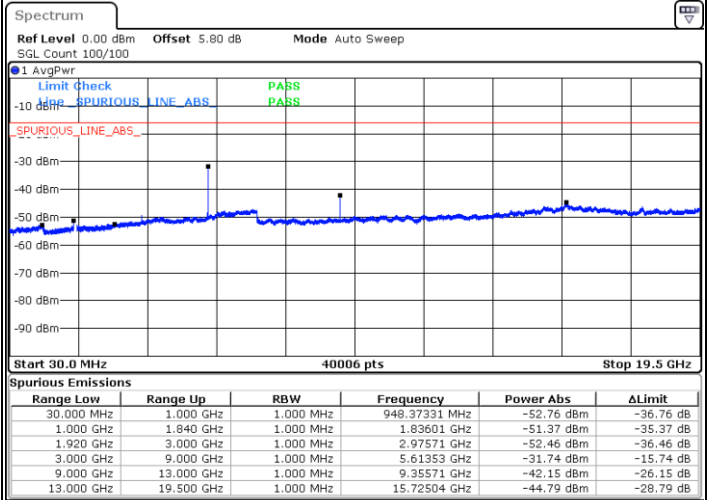
LTE Band 25 / 20MHz

Lowest Channel / 64QAM



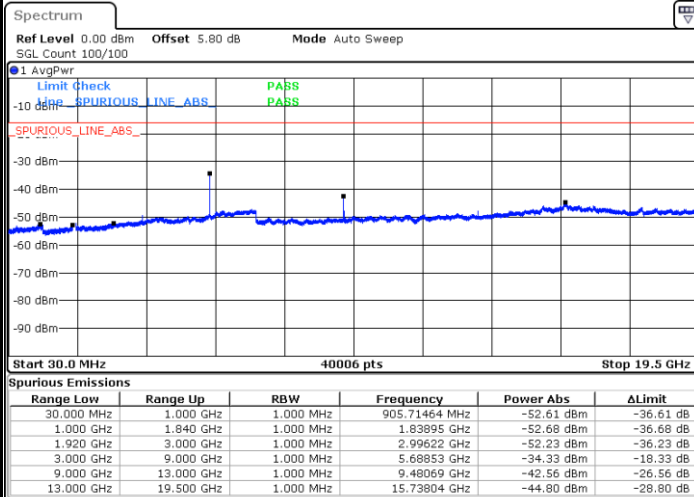
Date: 10 DEC 2019 02:24:03

Middle Channel / 64QAM



Date: 10 DEC 2019 02:28:52

Highest Channel / 64QAM



Date: 10 DEC 2019 02:34:13



A.3.7 Frequency Stability

Test Conditions		LTE Band 4 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0022	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0021	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0008	
0	Normal Voltage	0.0013	
-10	Normal Voltage	0.0019	
-20	Normal Voltage	0.0019	
-30	Normal Voltage	0.0018	
20	Maximum Voltage	0.0023	
20	Normal Voltage	0.0031	
20	Battery End Point	0.0004	

Note:

1. Normal Voltage =120 V. ; Battery End Point (BEP) =90 V. ; Maximum Voltage =264 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0021	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0021	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0008	
0	Normal Voltage	0.0013	
-10	Normal Voltage	0.0019	
-20	Normal Voltage	0.0019	
-30	Normal Voltage	0.0018	
20	Maximum Voltage	0.0023	
20	Normal Voltage	0.0029	
20	Battery End Point	0.0005	

Note:

1. Normal Voltage =120 V. ; Battery End Point (BEP) =90 V. ; Maximum Voltage =264 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

Test Conditions		LTE Band 25 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0020	PASS
40	Normal Voltage	0.0013	
30	Normal Voltage	0.0003	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0023	
0	Normal Voltage	0.0007	
-10	Normal Voltage	0.0003	
-20	Normal Voltage	0.0009	
-30	Normal Voltage	0.0013	
20	Maximum Voltage	0.0001	
20	Normal Voltage	0.0020	
20	Battery End Point	0.0014	

Note:

1. Normal Voltage =120 V. ; Battery End Point (BEP) =90 V. ; Maximum Voltage =264 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



A.4 MIMO Antenna 1+2

A.4.1 Conducted Output Power(Average power)

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	17.22	19.21	19.22
20	1	99		19.58	19.25	19.18
20	18	0		17.26	19.21	19.51
20	18	82		19.18	18.73	18.55
20	100	0		18.75	19.13	19.07
20	1	0	16-QAM	17.03	19.08	19.09
20	1	99		19.33	19.14	19.00
20	18	0		17.18	19.16	19.43
20	18	82		19.16	18.70	18.49
20	100	0		18.78	19.08	18.92
20	1	0	64-QAM	17.10	19.13	19.08
20	1	99		19.60	19.13	19.11
20	18	0		17.23	19.29	19.45
20	18	82		19.11	18.68	18.40
20	100	0		18.69	19.09	19.01
15	1	0	QPSK	17.76	19.82	19.53
15	1	74		19.19	19.16	19.00
15	16	0		17.00	19.41	19.18
15	16	59		19.19	19.14	19.04
15	75	0		18.01	19.11	18.81
15	1	0	16-QAM	17.18	19.48	19.21
15	1	74		18.93	19.19	18.83
15	16	0		16.90	19.38	19.22
15	16	59		18.70	19.20	19.01
15	75	0		18.05	19.18	18.80
15	1	0	64-QAM	17.24	19.13	19.50
15	1	74		19.08	19.11	18.96
15	16	0		16.89	16.43	19.08
15	16	59		18.68	18.55	18.91
15	75	0		17.97	17.89	18.78



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	16.86	19.03	18.93
10	1	49		19.02	19.08	18.97
10	12	0		16.95	19.35	19.07
10	12	38		18.74	19.18	18.67
10	50	0		18.03	19.12	18.82
10	1	0	16-QAM	16.78	19.71	18.63
10	1	49		18.88	19.36	20.53
10	12	0		16.98	19.35	18.98
10	12	38		18.71	19.23	18.58
10	50	0		18.02	19.13	18.70
10	1	0	64-QAM	16.97	19.73	18.80
10	1	49		19.04	19.20	18.96
10	12	0		16.98	19.30	18.93
10	12	38		18.70	19.16	18.49
10	50	0		18.01	19.07	18.78
5	1	0	QPSK	16.73	19.26	18.78
5	1	24		18.43	18.08	18.33
5	8	0		17.01	19.63	19.07
5	8	17		17.93	18.54	18.40
5	25	0		16.13	19.39	18.59
5	1	0	16-QAM	16.49	18.98	18.67
5	1	24		18.43	17.95	18.13
5	8	0		16.93	19.67	18.96
5	8	17		17.79	18.55	18.38
5	25	0		17.13	18.90	18.55
5	1	0	64-QAM	16.80	19.08	18.73
5	1	24		18.38	18.09	18.20
5	8	0		17.00	19.61	19.01
5	8	17		17.95	18.63	18.46
5	25	0		17.11	18.85	18.55



LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	17.52	19.74	18.33
3	1	14		17.26	18.80	19.09
3	15	0		17.39	19.17	18.43
3	1	0	16-QAM	18.05	19.52	17.94
3	1	14		17.23	18.58	18.06
3	15	0		17.35	19.21	18.42
3	1	0	64-QAM	17.49	19.62	18.23
3	1	14		17.33	18.80	19.11
3	15	0		17.35	19.16	18.45
1.4	1	0	QPSK	17.13	19.74	18.88
1.4	1	5		17.23	19.40	18.81
1.4	6	0		17.11	19.57	18.80
1.4	1	0	16-QAM	17.07	18.94	18.54
1.4	1	5		17.24	17.96	18.80
1.4	6	0		17.08	19.13	18.74
1.4	1	0	64-QAM	17.80	19.09	18.83
1.4	1	5		17.30	19.24	18.85
1.4	6	0		17.03	19.18	18.73



LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	17.30	19.29	19.33
20	1	99		19.62	19.32	19.32
20	18	0		17.35	19.39	19.61
20	18	82		19.24	18.79	18.64
20	100	0		18.82	19.23	19.14
20	1	0	16-QAM	17.14	19.19	19.19
20	1	99		19.45	19.25	19.10
20	18	0		17.31	19.32	19.61
20	18	82		19.27	18.81	18.67
20	100	0		18.81	19.20	19.04
20	1	0	64-QAM	17.23	19.26	19.29
20	1	99		19.69	19.29	19.33
20	18	0		17.36	19.43	19.59
20	18	82		19.23	18.82	18.61
20	100	0		18.81	19.23	19.12
15	1	0	QPSK	17.34	19.89	19.63
15	1	74		19.28	19.30	19.11
15	16	0		17.08	19.51	19.29
15	16	59		19.30	19.28	19.10
15	75	0		18.12	19.22	18.91
15	1	0	16-QAM	17.31	19.56	19.34
15	1	74		19.02	19.28	18.90
15	16	0		17.02	19.49	19.32
15	16	59		18.80	19.31	19.13
15	75	0		18.10	19.29	18.89
15	1	0	64-QAM	17.38	19.30	19.62
15	1	74		19.18	19.25	19.08
15	16	0		16.99	16.60	19.22
15	16	59		18.81	18.71	19.02
15	75	0		18.10	18.01	18.91



LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	16.92	19.12	19.01
10	1	49		19.10	19.18	19.07
10	12	0		17.05	19.50	19.14
10	12	38		18.82	19.27	18.71
10	50	0		18.14	19.23	18.90
10	1	0	16-QAM	16.90	19.80	18.72
10	1	49		18.99	19.47	20.48
10	12	0		17.10	19.50	19.10
10	12	38		18.82	19.31	18.69
10	50	0		18.12	19.25	18.87
10	1	0	64-QAM	17.05	19.83	18.95
10	1	49		19.13	19.32	19.09
10	12	0		17.07	19.51	19.08
10	12	38		18.80	19.30	18.63
10	50	0		18.12	19.22	18.90
5	1	0	QPSK	16.82	19.29	18.91
5	1	24		18.48	18.14	18.46
5	8	0		17.08	19.73	19.14
5	8	17		18.00	18.64	18.53
5	25	0		16.26	19.48	18.71
5	1	0	16-QAM	16.60	19.07	18.76
5	1	24		18.52	18.04	18.22
5	8	0		17.00	19.73	19.07
5	8	17		17.91	18.61	18.48
5	25	0		17.22	19.01	18.68
5	1	0	64-QAM	16.85	19.20	18.86
5	1	24		18.53	18.20	18.33
5	8	0		17.10	19.73	19.14
5	8	17		18.04	18.76	18.57
5	25	0		17.22	18.99	18.67



LTE Band 25 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	17.61	19.82	18.43
3	1	14		17.40	18.89	19.23
3	15	0		17.50	19.29	18.56
3	1	0	16-QAM	17.62	19.62	18.02
3	1	14		17.36	18.64	18.17
3	15	0		17.49	19.30	18.60
3	1	0	64-QAM	17.60	19.73	18.34
3	1	14		17.45	18.93	19.24
3	15	0		17.50	19.28	18.58
1.4	1	0	QPSK	17.23	19.81	18.95
1.4	1	5		17.34	19.50	18.92
1.4	6	0		17.17	19.68	18.93
1.4	1	0	16-QAM	17.23	19.02	18.63
1.4	1	5		17.34	18.03	18.91
1.4	6	0		17.20	19.20	18.83
1.4	1	0	64-QAM	17.90	19.19	18.92
1.4	1	5		17.43	19.36	18.96
1.4	6	0		17.15	19.27	18.84



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	15.71	17.12	16.99
20	1	99		17.17	17.07	16.94
20	18	0		16.10	17.11	16.89
20	18	82		17.13	17.33	16.87
20	100	0		17.04	16.83	17.01
20	1	0	16-QAM	15.69	16.94	17.02
20	1	99		17.19	17.01	16.93
20	18	0		16.15	17.11	16.89
20	18	82		17.15	17.37	16.85
20	100	0		16.99	16.82	17.01
20	1	0	64-QAM	15.59	16.82	16.94
20	1	99		17.16	16.91	16.81
20	18	0		16.06	17.15	16.79
20	18	82		17.07	17.29	16.78
20	100	0		17.02	16.73	16.89
15	1	0	QPSK	15.12	17.26	17.14
15	1	74		16.98	17.07	17.25
15	16	0		15.79	16.72	16.67
15	16	59		17.01	16.97	17.22
15	75	0		16.86	16.99	17.08
15	1	0	16-QAM	15.13	17.26	17.11
15	1	74		16.92	17.11	17.22
15	16	0		15.73	16.69	16.65
15	16	59		17.00	16.93	17.18
15	75	0		16.85	17.00	17.03
15	1	0	64-QAM	15.21	17.24	17.02
15	1	74		16.84	17.11	17.25
15	16	0		15.62	16.59	16.58
15	16	59		17.03	16.94	17.13
15	75	0		16.78	17.01	17.15



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	14.89	16.55	16.79
10	1	49		15.98	16.57	16.46
10	12	0		15.39	17.03	17.25
10	12	38		17.29	16.85	17.22
10	50	0		16.45	16.81	17.19
10	1	0	16-QAM	14.86	16.51	16.79
10	1	49		15.94	16.57	16.50
10	12	0		15.40	16.98	17.28
10	12	38		17.32	16.85	17.25
10	50	0		16.45	16.82	17.22
10	1	0	64-QAM	15.04	16.52	16.78
10	1	49		15.89	16.59	16.42
10	12	0		15.32	16.92	17.17
10	12	38		17.29	16.81	17.14
10	50	0		16.49	16.71	17.25
5	1	0	QPSK	14.67	16.04	16.50
5	1	24		15.54	15.85	16.23
5	8	0		15.51	17.02	17.14
5	8	17		15.93	16.81	16.88
5	25	0		15.44	16.36	16.91
5	1	0	16-QAM	14.66	15.99	16.46
5	1	24		15.53	15.83	16.20
5	8	0		15.48	17.00	17.12
5	8	17		15.89	16.75	16.84
5	25	0		15.42	16.30	16.92
5	1	0	64-QAM	14.59	15.94	16.42
5	1	24		15.57	15.76	16.13
5	8	0		15.41	16.93	17.15
5	8	17		15.82	16.65	16.71
5	25	0		15.33	16.30	16.93



LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	14.89	16.53	16.74
3	1	14		15.09	16.27	16.72
3	15	0		15.11	16.81	17.04
3	1	0	16-QAM	14.90	16.50	16.78
3	1	14		15.07	16.24	16.70
3	15	0		15.12	16.85	17.04
3	1	0	64-QAM	14.80	16.43	16.68
3	1	14		14.98	16.17	16.64
3	15	0		15.12	16.75	17.03
1.4	1	0	QPSK	15.08	16.50	16.95
1.4	1	5		15.10	16.47	16.93
1.4	6	0		15.06	16.44	16.87
1.4	1	0	16-QAM	15.12	16.51	16.93
1.4	1	5		15.12	16.42	16.97
1.4	6	0		15.05	16.40	16.83
1.4	1	0	64-QAM	15.05	16.44	16.83
1.4	1	5		15.07	16.34	16.87
1.4	6	0		15.00	16.31	16.77



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	16.64	17.49	16.71
20	1	99		16.87	17.47	16.64
20	18	0		16.87	17.45	16.58
20	18	82		16.64	17.37	16.65
20	100	0		16.61	17.16	16.81
20	1	0	16-QAM	16.48	17.28	16.76
20	1	99		16.77	17.38	16.30
20	18	0		16.76	17.34	16.44
20	18	82		16.65	17.22	16.22
20	100	0		16.73	17.48	16.62
20	1	0	64-QAM	16.56	17.40	16.75
20	1	99		16.88	17.39	16.32
20	18	0		16.75	17.33	16.49
20	18	82		16.61	17.23	16.22
20	100	0		16.59	17.16	16.65
15	1	0	QPSK	16.52	17.35	17.30
15	1	74		16.92	17.32	16.67
15	16	0		16.32	16.96	16.59
15	16	59		16.92	17.14	16.99
15	75	0		16.81	17.36	17.45
15	1	0	16-QAM	16.33	17.45	16.74
15	1	74		16.62	17.47	16.43
15	16	0		16.16	17.27	16.23
15	16	59		16.93	17.45	16.32
15	75	0		16.92	17.15	16.76
15	1	0	64-QAM	16.38	17.23	16.42
15	1	74		16.69	16.33	16.39
15	16	0		16.32	17.00	16.15
15	16	59		16.89	17.37	16.63
15	75	0		16.76	17.09	16.73



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	16.61	17.48	17.06
10	1	49		16.73	17.35	16.45
10	12	0		16.90	17.40	17.47
10	12	38		16.68	17.22	16.43
10	50	0		16.91	17.21	16.90
10	1	0	16-QAM	16.47	17.31	16.63
10	1	49		16.68	17.18	16.15
10	12	0		16.32	17.25	16.80
10	12	38		16.58	17.24	16.32
10	50	0		16.79	17.13	16.82
10	1	0	64-QAM	16.48	17.32	16.85
10	1	49		16.56	17.26	16.38
10	12	0		16.32	17.21	16.74
10	12	38		16.35	17.19	16.75
10	50	0		16.82	17.14	16.82
5	1	0	QPSK	16.33	17.31	16.61
5	1	24		16.87	17.23	16.65
5	8	0		17.02	17.47	17.06
5	8	17		16.91	17.15	16.82
5	25	0		16.82	17.18	16.90
5	1	0	16-QAM	16.70	17.28	16.61
5	1	24		17.01	17.01	16.55
5	8	0		17.02	17.45	17.15
5	8	17		16.94	17.02	16.41
5	25	0		16.65	17.08	16.59
5	1	0	64-QAM	16.75	17.28	16.86
5	1	24		16.94	16.92	16.39
5	8	0		16.92	17.49	16.92
5	8	17		16.91	16.92	16.40
5	25	0		16.75	17.02	16.47



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
20	1	0	QPSK	15.60	17.02	16.93
20	1	99		17.07	16.98	16.85
20	18	0		15.98	17.03	16.81
20	18	82		17.03	17.25	16.79
20	100	0		16.95	16.70	16.89
20	1	0	16-QAM	15.60	16.84	16.90
20	1	99		17.00	16.84	16.80
20	18	0		15.99	16.96	16.75
20	18	82		17.03	17.21	16.75
20	100	0		16.38	16.57	16.89
20	1	0	64-QAM	15.47	16.71	16.79
20	1	99		17.03	16.80	16.72
20	18	0		15.94	17.04	16.65
20	18	82		16.95	17.11	16.65
20	100	0		16.91	16.65	16.80
15	1	0	QPSK	14.97	17.13	16.98
15	1	74		16.84	16.98	17.08
15	16	0		15.66	16.61	16.53
15	16	59		16.89	16.84	17.09
15	75	0		16.71	16.85	16.99
15	1	0	16-QAM	15.01	17.15	16.95
15	1	74		16.42	17.00	17.07
15	16	0		15.60	16.59	16.54
15	16	59		16.88	16.80	17.09
15	75	0		16.73	16.86	16.91
15	1	0	64-QAM	15.09	17.13	16.91
15	1	74		16.67	17.01	17.07
15	16	0		15.50	16.45	16.45
15	16	59		16.92	16.83	16.98
15	75	0		16.67	16.88	17.01



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
10	1	0	QPSK	14.77	16.42	16.70
10	1	49		15.86	16.46	16.35
10	12	0		15.23	16.88	17.13
10	12	38		17.16	16.72	17.08
10	50	0		16.34	16.69	17.08
10	1	0	16-QAM	14.77	16.35	16.65
10	1	49		15.81	16.45	16.39
10	12	0		15.28	16.90	17.13
10	12	38		17.21	16.76	17.08
10	50	0		16.33	16.72	17.14
10	1	0	64-QAM	14.90	16.42	16.62
10	1	49		15.76	16.46	16.26
10	12	0		15.12	16.83	17.04
10	12	38		17.13	16.69	17.00
10	50	0		16.35	16.58	17.13
5	1	0	QPSK	14.58	15.91	16.41
5	1	24		15.42	15.74	16.12
5	8	0		15.35	16.92	17.04
5	8	17		15.83	16.73	16.77
5	25	0		15.28	16.25	16.82
5	1	0	16-QAM	14.55	15.80	16.34
5	1	24		15.38	15.74	16.12
5	8	0		15.84	16.90	16.98
5	8	17		15.78	16.65	16.73
5	25	0		15.25	16.22	16.81
5	1	0	64-QAM	14.52	15.80	16.28
5	1	24		15.44	15.67	16.02
5	8	0		15.21	16.79	17.08
5	8	17		15.68	16.52	16.62
5	25	0		15.21	16.18	16.83



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
3	1	0	QPSK	14.82	16.40	16.64
3	1	14		14.96	16.15	16.62
3	15	0		15.02	16.72	16.96
3	1	0	16-QAM	14.80	16.35	16.65
3	1	14		14.91	16.06	16.55
3	15	0		15.02	16.75	16.90
3	1	0	64-QAM	14.67	16.23	16.59
3	1	14		14.82	16.06	16.50
3	15	0		14.98	16.66	16.87
1.4	1	0	QPSK	14.98	16.34	16.84
1.4	1	5		14.99	16.34	16.80
1.4	6	0		14.93	16.23	16.77
1.4	1	0	16-QAM	15.01	16.43	16.83
1.4	1	5		14.99	16.29	16.90
1.4	6	0		14.96	16.33	16.76
1.4	1	0	64-QAM	14.88	16.23	16.70
1.4	1	5		14.88	16.18	16.73
1.4	6	0		14.85	16.13	16.64

**A.4.2 EIRP**

Antenna Directional Gain:

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

The EUT supports CDD Mode; Directional gain is calculated as:

$$\text{Directional gain} = G_{\text{ANT}} + \text{Array Gain};$$

$$\text{Array Gain} = 10 \log(N_{\text{ANT}}/N_{\text{SS}}) \text{ dB};$$

Where:

G_{ANT} = single antenna gain (If all antennas have the same gain)

N_{SS} = the number of independent spatial streams of data;

N_{ANT} = the total number of antennas

LTE Band 4 (GT - LC = 12.51 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	19957	20175	20393	19965	20175	20385	19975	20175	20375
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1710.7	1732.5	1754.3	1711.5	1732.5	1753.5	1712.5	1732.5	1752.5
(MHz)									
Conducted Power (dBm)	15.08	16.50	16.95	15.11	16.81	17.04	15.51	17.02	17.14
Conducted Power (Watts)	0.0322	0.0446	0.0495	0.0324	0.0480	0.0505	0.0356	0.0504	0.0517
EIRP(dBm)	27.59	29.01	29.46	27.62	29.32	29.55	28.02	29.53	29.65
EIRP(Watts)	0.5735	0.7954	0.8822	0.5781	0.8548	0.9006	0.6339	0.8981	0.9218

LTE Band 4 (GT - LC = 12.51 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	20000	20175	20350	20025	20175	20325	20050	20175	20300
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1715	1732.5	1750	1717.5	1732.5	1747.5	1720	1732.5	1745
(MHz)									
Conducted Power (dBm)	17.29	16.85	17.22	15.12	17.26	17.14	17.13	17.33	16.87
Conducted Power (Watts)	0.0536	0.0484	0.0527	0.0325	0.0532	0.0517	0.0516	0.0541	0.0486
EIRP(dBm)	29.80	29.36	29.73	27.63	29.77	29.65	29.64	29.84	29.38
EIRP(Watts)	0.9546	0.8621	0.9388	0.5791	0.9476	0.9224	0.9195	0.9639	0.8666



LTE Band 4 (GT - LC = 12.51 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	19957	20175	20393	19965	20175	20385	19975	20175	20375
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1710.7	1732.5	1754.3	1711.5	1732.5	1753.5	1712.5	1732.5	1752.5
(MHz)									
Conducted Power (dBm)	15.12	16.42	16.97	15.12	16.85	17.04	15.48	17.00	17.12
Conducted Power (Watts)	0.0325	0.0438	0.0497	0.0325	0.0485	0.0505	0.0353	0.0502	0.0515
EIRP(dBm)	27.63	28.93	29.48	27.63	29.36	29.55	27.99	29.51	29.63
EIRP(Watts)	0.5795	0.7808	0.8862	0.5789	0.8638	0.9006	0.6289	0.8939	0.9176

LTE Band 4 (GT - LC = 12.51 dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	20000	20175	20350	20025	20175	20325	20050	20175	20300
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1715	1732.5	1750	1717.5	1732.5	1747.5	1720	1732.5	1745
(MHz)									
Conducted Power (dBm)	17.32	16.85	17.25	15.13	17.26	17.11	17.15	17.37	16.85
Conducted Power (Watts)	0.0539	0.0484	0.0530	0.0325	0.0532	0.0514	0.0519	0.0546	0.0484
EIRP(dBm)	29.83	29.36	29.76	27.64	29.77	29.62	29.66	29.88	29.36
EIRP(Watts)	0.9611	0.8623	0.9453	0.5801	0.9479	0.9158	0.9248	0.9727	0.8623



LTE Band 4 (GT - LC = 12.51 dB) 64QAM									
Bandwidth	1.4M			3M			5M		
Channel	19957	20175	20393	19965	20175	20385	19975	20175	20375
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1710.7	1732.5	1754.3	1711.5	1732.5	1753.5	1712.5	1732.5	1752.5
(MHz)									
Conducted Power (dBm)	15.07	16.34	16.87	15.12	16.75	17.03	15.41	16.93	17.15
Conducted Power (Watts)	0.0321	0.0431	0.0486	0.0325	0.0473	0.0504	0.0347	0.0494	0.0518
EIRP(dBm)	27.58	28.85	29.38	27.63	29.26	29.54	27.92	29.44	29.66
EIRP(Watts)	0.5722	0.7674	0.8670	0.5795	0.8433	0.8987	0.6188	0.8796	0.9237

LTE Band 4 (GT - LC = 12.51 dB) 64QAM									
Bandwidth	10M			15M			20M		
Channel	20000	20175	20350	20025	20175	20325	20050	20175	20300
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1715	1732.5	1750	1717.5	1732.5	1747.5	1720	1732.5	1745
(MHz)									
Conducted Power (dBm)	17.29	16.81	17.14	16.84	17.11	17.25	17.07	17.29	16.78
Conducted Power (Watts)	0.0536	0.0480	0.0518	0.0483	0.0514	0.0531	0.0509	0.0535	0.0477
EIRP(dBm)	29.80	29.32	29.65	29.35	29.62	29.76	29.58	29.80	29.29
EIRP(Watts)	0.9556	0.8555	0.9227	0.8605	0.9163	0.9463	0.9069	0.9541	0.8496



LTE Band 25 (GT - LC = 12.51 dB) QPSK									
Bandwidth	1.4M			3M			5M		
Channel	26407	26340	26683	26055	26340	26675	26065	26340	26665
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1850.7	1880	1914.3	1851.5	1880	1913.5	1852.5	1880	1912.5
(MHz)									
Conducted Power (dBm)	17.23	19.81	18.95	17.61	19.82	18.43	17.08	19.73	19.14
Conducted Power (Watts)	0.0528	0.0956	0.0785	0.0577	0.0958	0.0696	0.0511	0.0939	0.0821
EIRP(dBm)	29.74	32.32	31.46	30.12	32.33	30.94	29.59	32.24	31.65
EIRP(Watts)	0.9411	1.7044	1.3997	1.0282	1.7083	1.2407	0.9104	1.6732	1.4625

LTE Band 25 (GT - LC = 12.51 dB) QPSK									
Bandwidth	10M			15M			20M		
Channel	26090	26340	26640	26115	26340	26615	26140	26340	26590
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1855	1880	1910	1857.5	1880	1907.5	1860	1880	1905
(MHz)									
Conducted Power (dBm)	17.05	19.50	19.14	17.34	19.89	19.63	19.62	19.32	19.32
Conducted Power (Watts)	0.0507	0.0891	0.0821	0.0541	0.0975	0.0917	0.0915	0.0854	0.0854
EIRP(dBm)	29.56	32.01	31.65	29.85	32.40	32.14	32.13	31.83	31.83
EIRP(Watts)	0.9039	1.5889	1.4625	0.9650	1.7382	1.6351	1.6314	1.5227	1.5225



LTE Band 25 (GT - LC = 12.51 dB) 16QAM									
Bandwidth	1.4M			3M			5M		
Channel	26407	26340	26683	26055	26340	26675	26065	26340	26665
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1850.7	1880	1914.3	1851.5	1880	1913.5	1852.5	1880	1912.5
(MHz)									
Conducted Power (dBm)	17.20	19.20	18.83	17.62	19.62	18.02	17.00	19.73	19.07
Conducted Power (Watts)	0.0524	0.0831	0.0763	0.0578	0.0916	0.0634	0.0501	0.0940	0.0807
EIRP(dBm)	29.71	31.71	31.34	30.13	32.13	30.53	29.51	32.24	31.58
EIRP(Watts)	0.9345	1.4811	1.3600	1.0293	1.6332	1.1299	0.8925	1.6751	1.4390

LTE Band 25 (GT - LC = 12.51 dB) 16QAM									
Bandwidth	10M			15M			20M		
Channel	26090	26340	26640	26115	26340	26615	26140	26340	26590
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1855	1880	1910	1857.5	1880	1907.5	1860	1880	1905
(MHz)									
Conducted Power (dBm)	18.99	19.47	20.48	17.31	19.56	19.34	17.31	19.32	19.61
Conducted Power (Watts)	0.0792	0.0885	0.1116	0.0538	0.0903	0.0858	0.0538	0.0854	0.0913
EIRP(dBm)	31.50	31.98	32.99	29.82	32.07	31.85	29.82	31.83	32.12
EIRP(Watts)	1.4111	1.5781	1.9898	0.9585	1.6089	1.5294	0.9595	1.5225	1.6277



LTE Band 25 (GT - LC = 12.51 dB) 64QAM									
Bandwidth	1.4M			3M			5M		
Channel	26407	26340	26683	26055	26340	26675	26065	26340	26665
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1850.7	1880	1914.3	1851.5	1880	1913.5	1852.5	1880	1912.5
(MHz)									
Conducted Power (dBm)	17.43	19.36	18.96	17.60	19.73	18.34	17.10	19.73	19.14
Conducted Power (Watts)	0.0554	0.0862	0.0787	0.0576	0.0940	0.0682	0.0513	0.0940	0.0820
EIRP(dBm)	29.94	31.87	31.47	30.11	32.24	30.85	29.61	32.24	31.65
EIRP(Watts)	0.9866	1.5366	1.4029	1.0258	1.6751	1.2150	0.9135	1.6751	1.4624

LTE Band 25 (GT - LC = 12.51 dB) 64QAM									
Bandwidth	10M			15M			20M		
Channel	26090	26340	26640	26115	26340	26615	26140	26340	26590
	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)	(Low)	(Mid)	(High)
Frequency	1855	1880	1910	1857.5	1880	1907.5	1860	1880	1905
(MHz)									
Conducted Power (dBm)	17.05	19.83	18.95	17.38	19.30	19.62	19.69	19.29	19.33
Conducted Power (Watts)	0.0507	0.0962	0.0784	0.0547	0.0851	0.0915	0.0931	0.0848	0.0856
EIRP(dBm)	29.56	32.34	31.46	29.89	31.81	32.13	32.20	31.80	31.84
EIRP(Watts)	0.9039	1.7141	1.3981	0.9751	1.5173	1.6314	1.6599	1.5120	1.5263

Appendix B. Test Results of Spurious Emission

B.1 SISO Antenna 1

LTE Band 4 / 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	3447	-58.69	-13	-45.69	-69.43	2.604	13.34	H
	5172	-54.62	-13	-41.62	-65.13	3.011	13.52	H
	6900	-52.62	-13	-39.62	-62.82	3.271	13.47	H
	3447	-56.65	-13	-43.65	-67.39	2.604	13.34	V
	5172	-52.42	-13	-39.42	-62.93	3.011	13.52	V
	6900	-53.62	-13	-40.62	-63.82	3.271	13.47	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	-59.40	-13	-46.40	-69.61	3.03	13.24	H
	7580	-59.97	-13	-46.97	-69.42	3.56	13.01	H
	10100	-56.96	-13	-43.96	-66.48	3.92	13.44	H
	5052	-57.31	-13	-44.31	-67.52	3.03	13.24	V
	7580	-59.27	-13	-46.27	-68.72	3.56	13.01	V
	10100	-58.08	-13	-45.08	-67.60	3.92	13.44	V

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

LTE Band 25 / 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	3741	-56.67	-13	-43.67	-68.93	2.641	14.90	H
	5613	-55.66	-13	-42.66	-67.52	2.94	14.80	H
	7488	-49.49	-13	-36.49	-59.26	3.39	13.16	H
	3741	-54.79	-13	-41.79	-67.05	2.64	14.90	V
	5613	-55.53	-13	-42.53	-67.39	2.94	14.80	V
	7488	-49.72	-13	-36.72	-59.49	3.39	13.16	V

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

B.2 MIMO Antenna 1+2

LTE Band 4 / 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	3447	-55.81	-13	-42.81	-66.55	2.604	13.34	H
	5172	-51.60	-13	-38.60	-62.11	3.011	13.52	H
	6900	-53.22	-13	-40.22	-63.42	3.271	13.47	H
	3447	-55.56	-13	-42.56	-66.30	2.604	13.34	V
	5172	-51.61	-13	-38.61	-62.12	3.011	13.52	V
	6900	-52.94	-13	-39.94	-63.14	3.271	13.47	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	-55.07	-13	-42.07	-65.28	3.03	13.24	H
	7580	-58.50	-13	-45.50	-67.95	3.56	13.01	H
	10100	-57.76	-13	-44.76	-67.28	3.92	13.44	H
	5052	-51.22	-13	-38.22	-61.43	3.03	13.24	V
	7580	-56.27	-13	-43.27	-65.72	3.56	13.01	V
	10100	-61.02	-13	-48.02	-70.54	3.92	13.44	V

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

LTE Band 25 / 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	3741	-55.21	-13	-42.21	-67.47	2.641	14.90	H
	5613	-55.59	-13	-42.59	-67.45	2.94	14.80	H
	7488	-49.81	-13	-36.81	-59.58	3.39	13.16	H
	3741	-52.99	-13	-39.99	-65.25	2.64	14.90	V
	5613	-53.36	-13	-40.36	-65.22	2.94	14.80	V
	7488	-49.86	-13	-36.86	-59.63	3.39	13.16	V

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