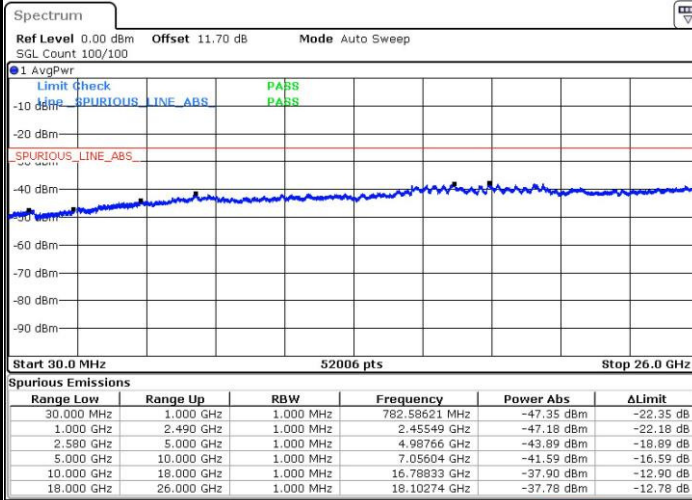




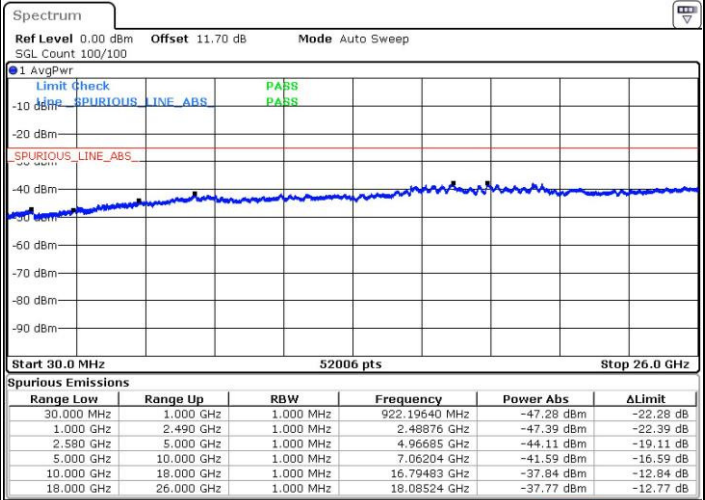
LTE Band 7 / 5MHz

Highest Channel / QPSK



Date: 24 MAY 2016 16:32:30

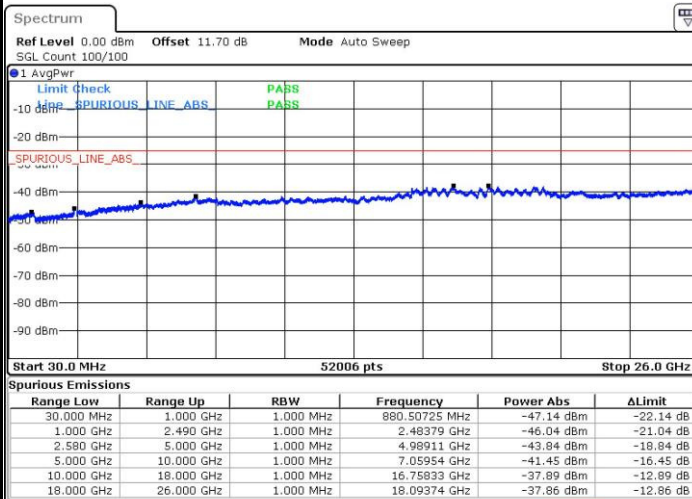
Highest Channel / 16QAM



Date: 24 MAY 2016 16:33:24

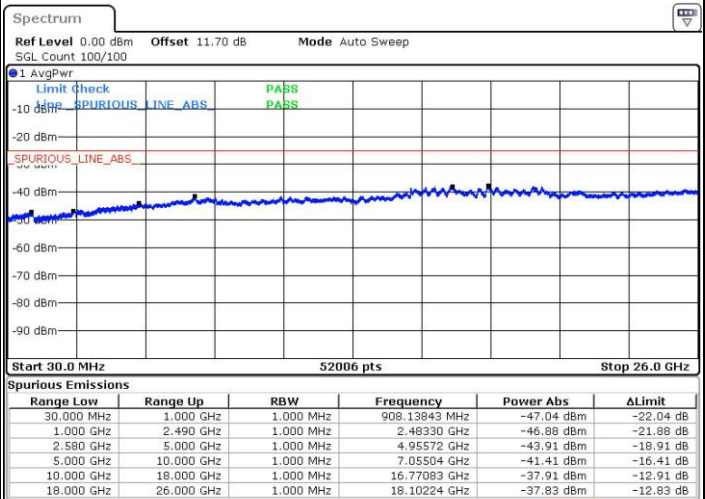
LTE Band 7 / 10MHz

Lowest Channel / QPSK



Date: 24 MAY 2016 16:39:40

Lowest Channel / 16QAM

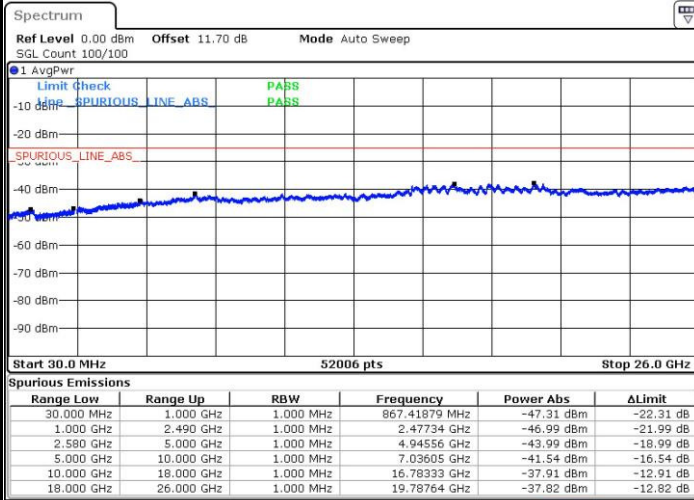


Date: 24 MAY 2016 16:40:34



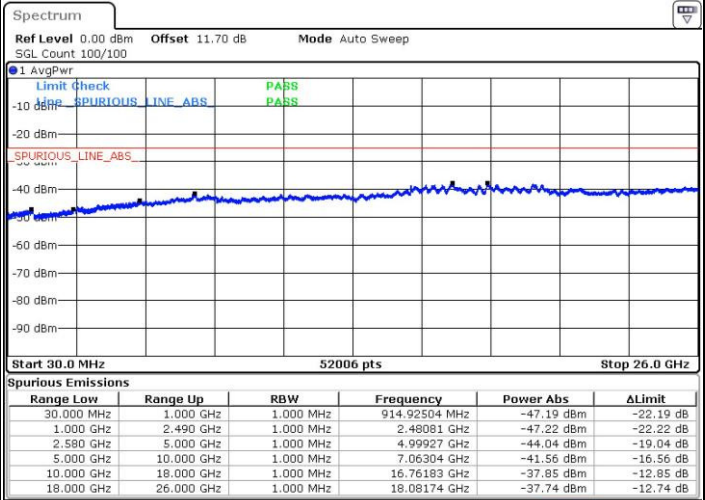
LTE Band 7 / 10MHz

Middle Channel / QPSK



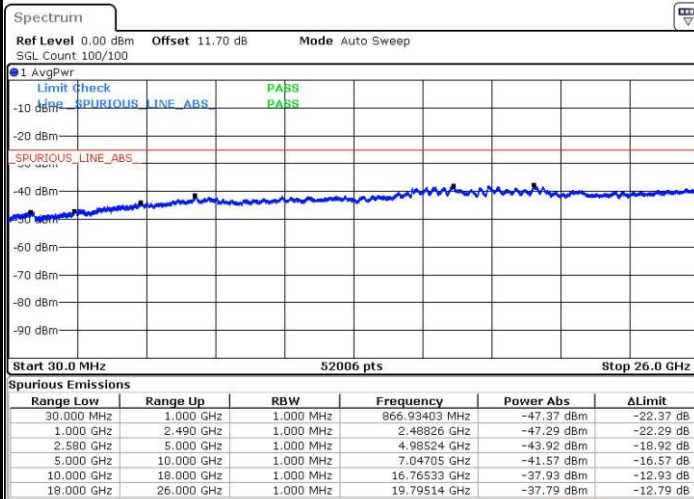
Date: 24 MAY 2016 16:42:10

Middle Channel / 16QAM



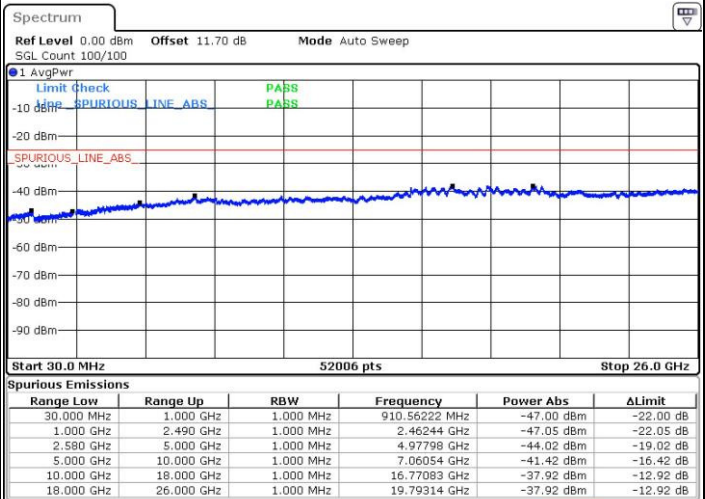
Date: 24 MAY 2016 16:43:04

Highest Channel / QPSK



Date: 24 MAY 2016 16:49:19

Highest Channel / 16QAM

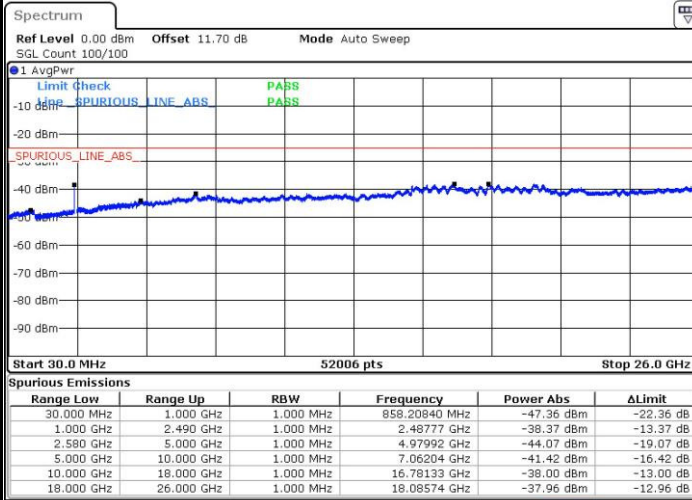


Date: 24 MAY 2016 16:50:12



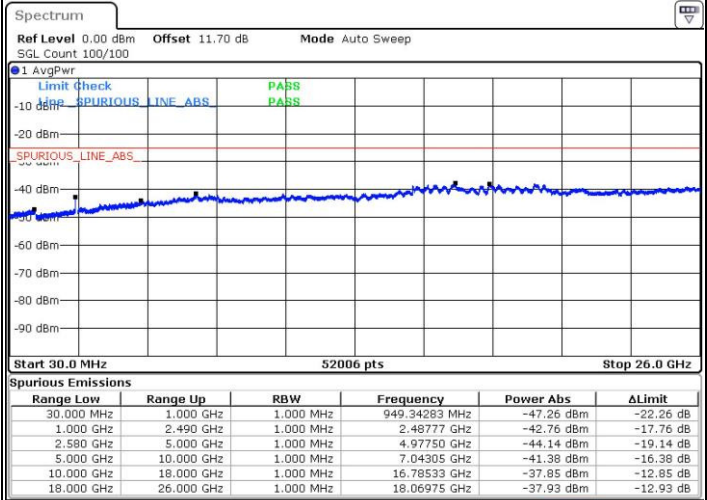
LTE Band 7 / 15MHz

Lowest Channel / QPSK



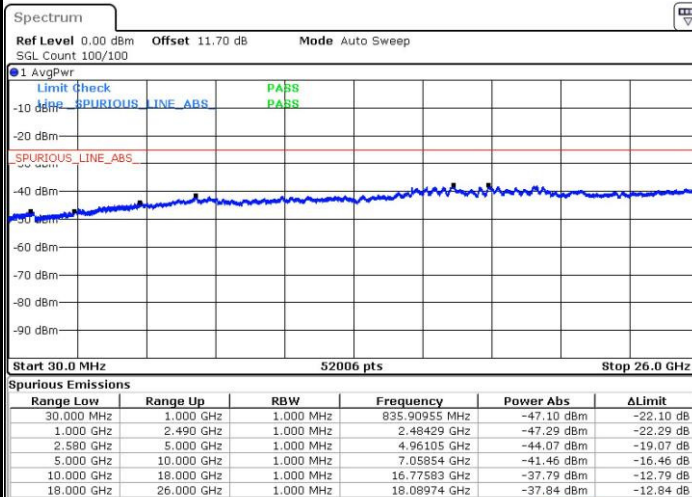
Date: 24 MAY 2016 16:56:27

Lowest Channel / 16QAM



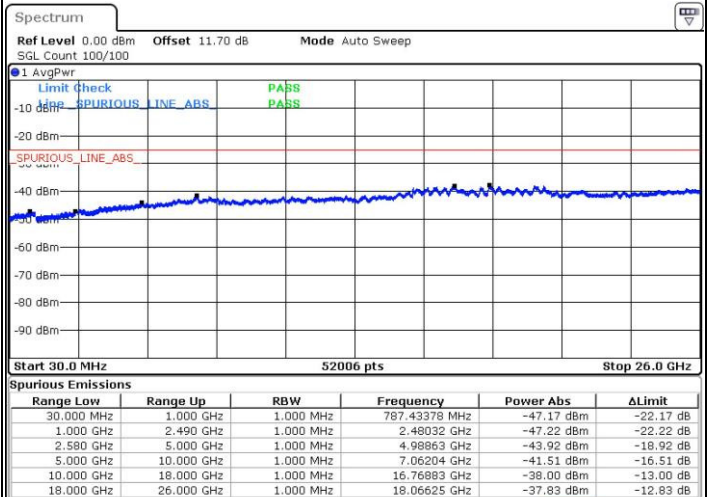
Date: 24 MAY 2016 16:57:21

Middle Channel / QPSK



Date: 24 MAY 2016 16:58:57

Middle Channel / 16QAM

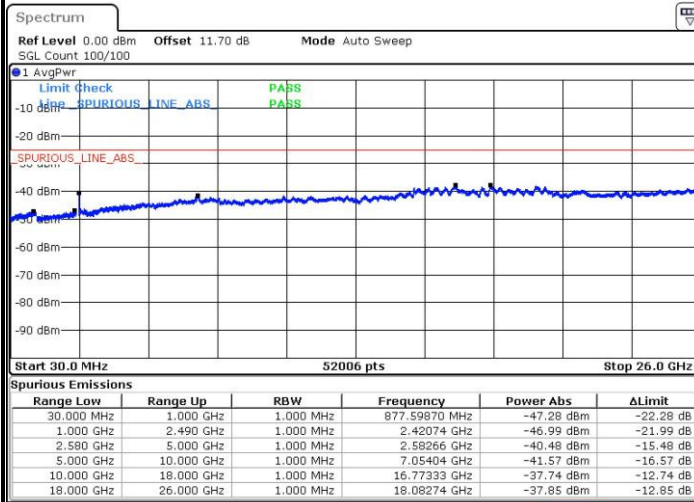


Date: 24 MAY 2016 16:59:51



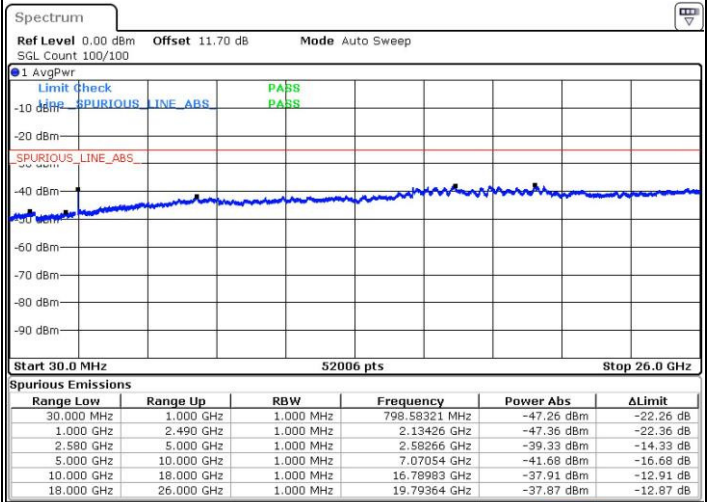
LTE Band7 / 15MHz

Highest Channel / QPSK



Date: 24 MAY 2016 17:06:06

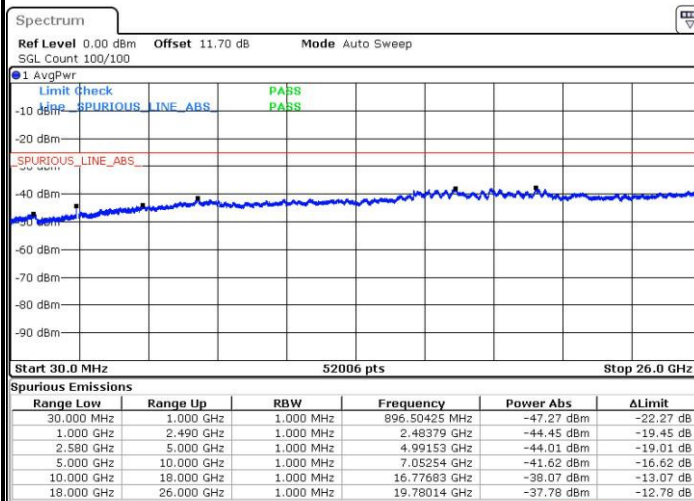
Highest Channel / 16QAM



Date: 24 MAY 2016 17:07:00

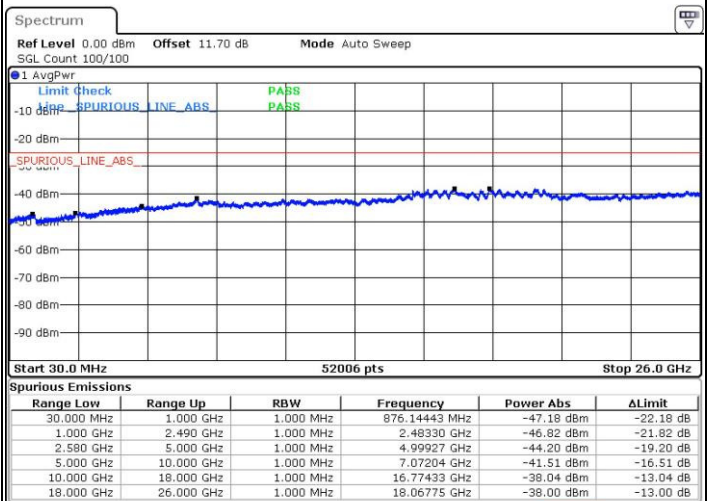
LTE Band 7 / 20MHz

Lowest Channel / QPSK



Date: 24 MAY 2016 17:13:14

Lowest Channel / 16QAM

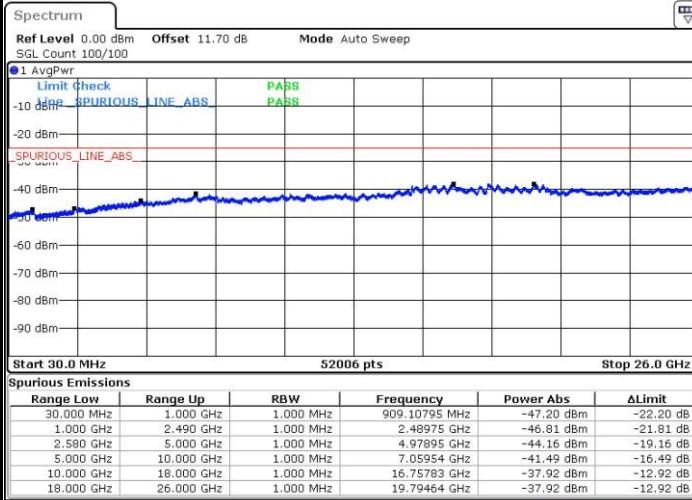


Date: 24 MAY 2016 17:14:08



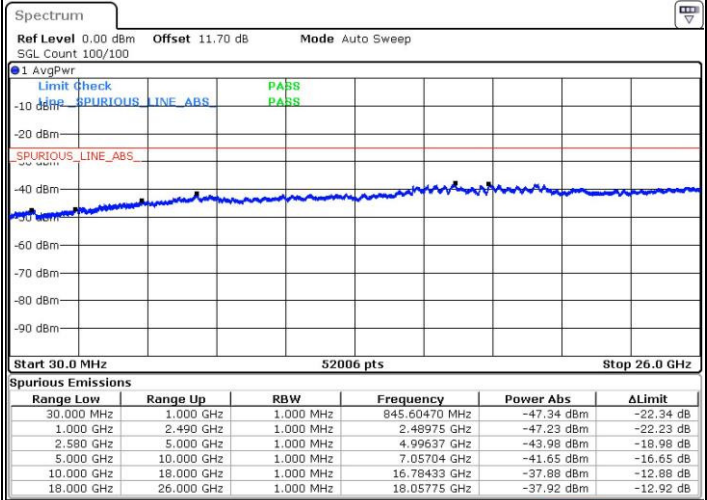
LTE Band 7 / 20MHz

Middle Channel / QPSK



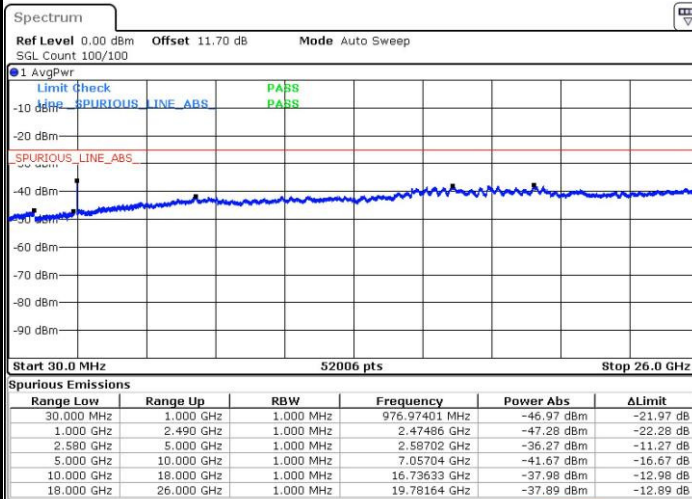
Date: 24 MAY 2016 17:15:45

Middle Channel / 16QAM



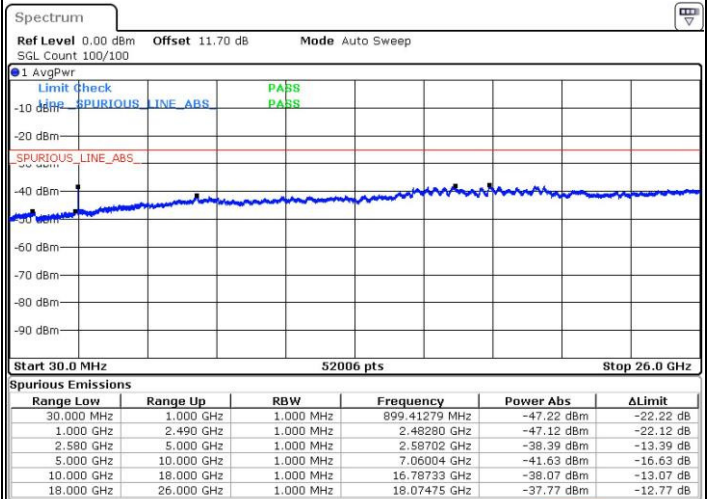
Date: 24 MAY 2016 17:16:38

Highest Channel / QPSK



Date: 24 MAY 2016 17:24:01

Highest Channel / 16QAM



Date: 24 MAY 2016 17:24:55

Frequency Stability

Test Conditions		LTE Band 7 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0087	PASS
40	Normal Voltage	0.0086	
30	Normal Voltage	0.0091	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0091	
-10	Normal Voltage	0.0008	
-20	Normal Voltage	0.0089	
-30	Normal Voltage	0.0092	
20	Maximum Voltage	0.0092	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0002	

Note:

1. Normal Voltage = 3.9 V. ; Battery End Point (BEP) = 3.4 V. ; Maximum Voltage =4.35 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



LTE Band 13

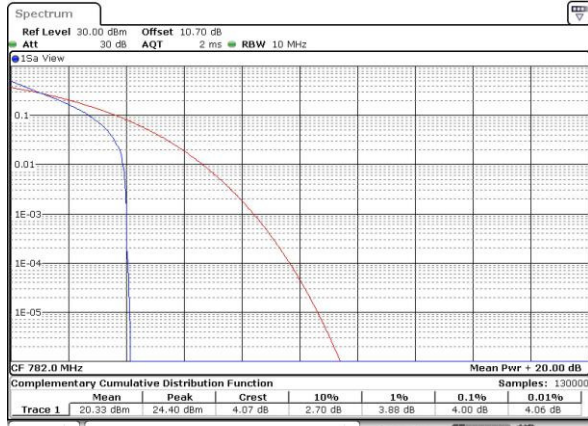
Peak-to-Average Ratio

Mode	LTE Band 13 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	-	-	-	-	PASS
Middle CH	4.00	5.04	4.90	6.06	
Highest CH	-	-	-	-	



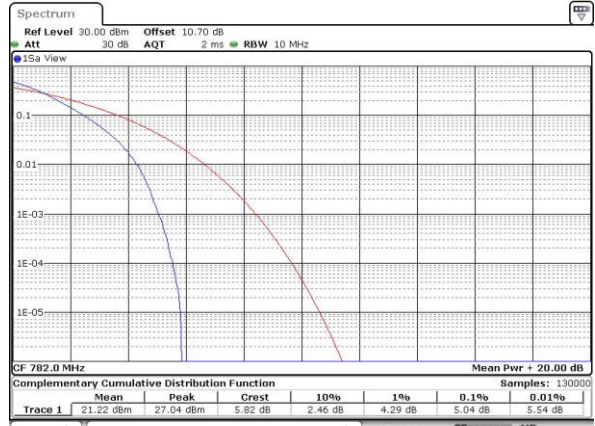
LTE Band 13 / 10MHz / QPSK

Middle Channel/ 1RB



Date: 24 MAY 2016 18:49:01

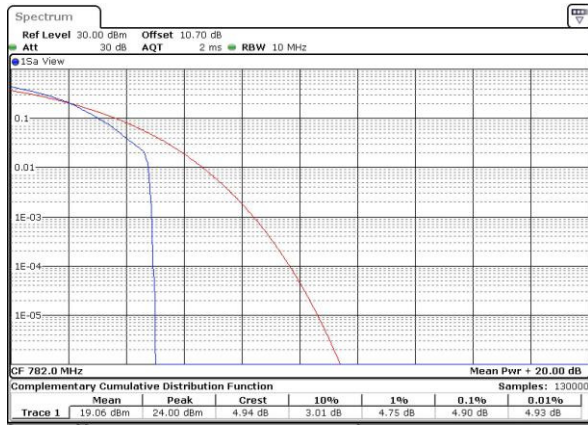
Middle Channel / Full RB



Date: 24 MAY 2016 18:49:13

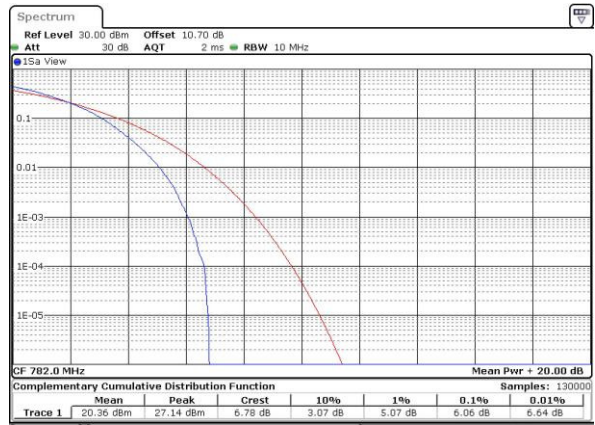
LTE Band 13 / 10MHz / 16QAM

Middle Channel/ 1RB



Date: 24 MAY 2016 18:47:49

Middle Channel / Full RB



Date: 24 MAY 2016 18:48:00

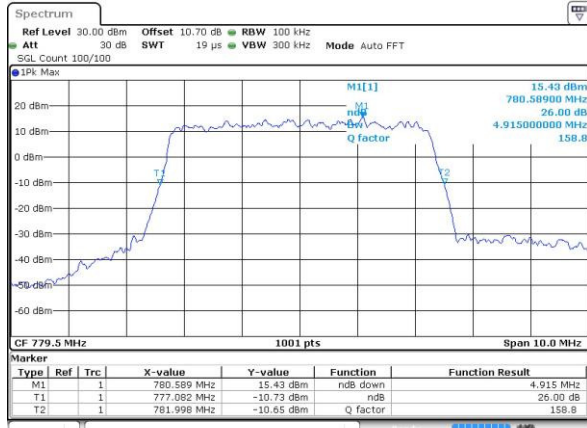
**26dB Bandwidth**

Mode	LTE Band 13 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.92	4.92	-	-	-	-	-	-
Middle CH	-	-	-	-	4.95	4.86	9.69	9.65	-	-	-	-
Highest CH	-	-	-	-	4.91	4.88	-	-	-	-	-	-



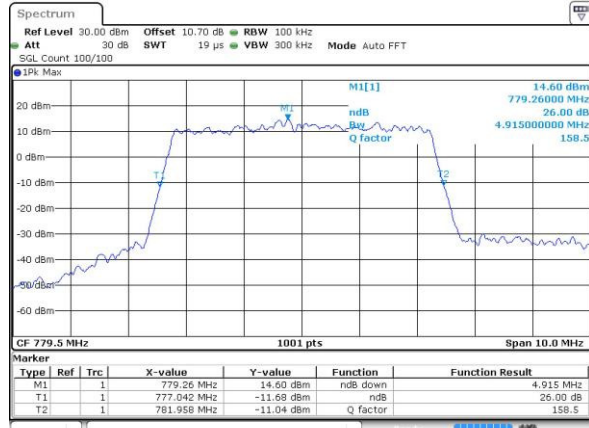
LTE Band 13

Lowest Channel / 5MHz / QPSK



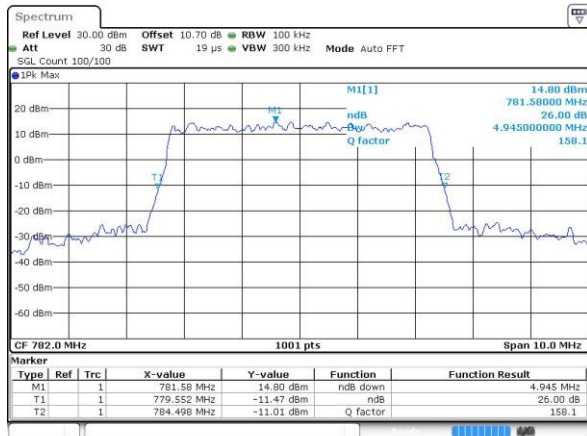
Date: 24 MAY 2016 17:41:36

Lowest Channel / 5MHz / 16QAM



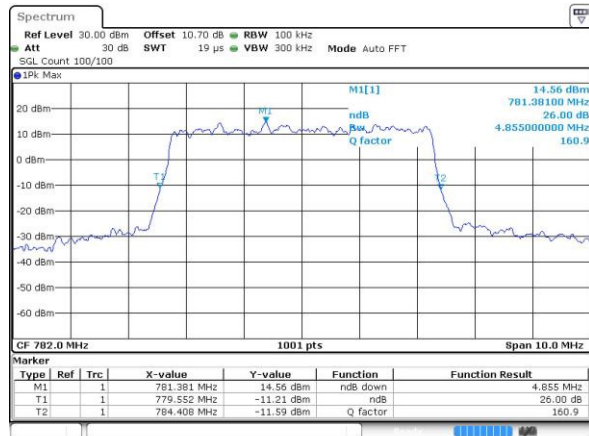
Date: 24 MAY 2016 17:41:28

Middle Channel / 5MHz / QPSK



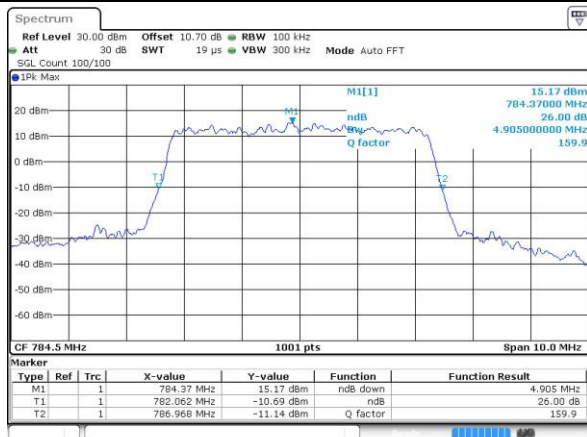
Date: 24 MAY 2016 17:50:01

Middle Channel / 5MHz / 16QAM



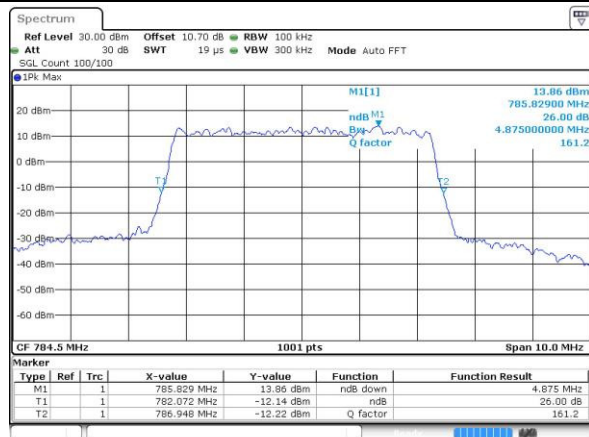
Date: 24 MAY 2016 17:50:12

Highest Channel / 5MHz / QPSK



Date: 24 MAY 2016 17:51:15

Highest Channel / 5MHz / 16QAM

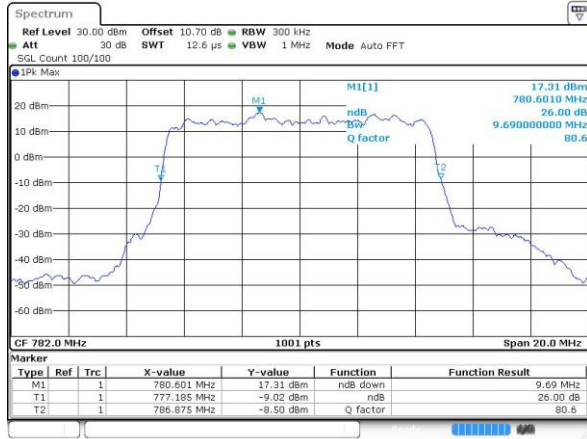


Date: 24 MAY 2016 17:51:04



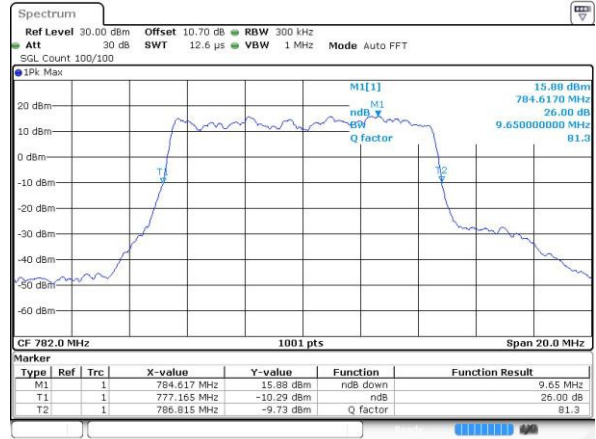
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 24 MAY 2016 17:58:22

Middle Channel / 10MHz / 16QAM



Date: 24 MAY 2016 17:58:12

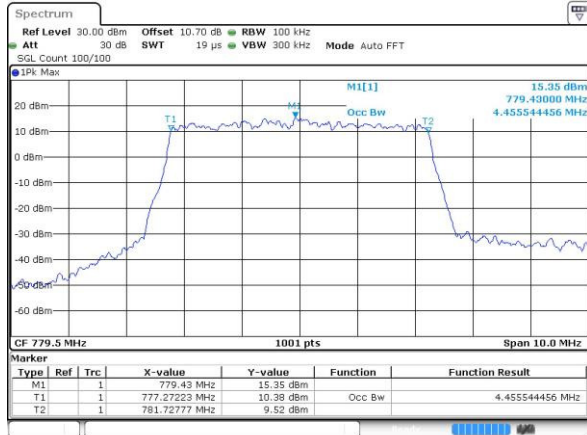
**Occupied Bandwidth**

Mode	LTE Band 13 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	-	-	-	-	4.46	4.46	-	-	-	-	-	-
Middle CH	-	-	-	-	4.48	4.48	8.99	8.99	-	-	-	-
Highest CH	-	-	-	-	4.47	4.47	-	-	-	-	-	-

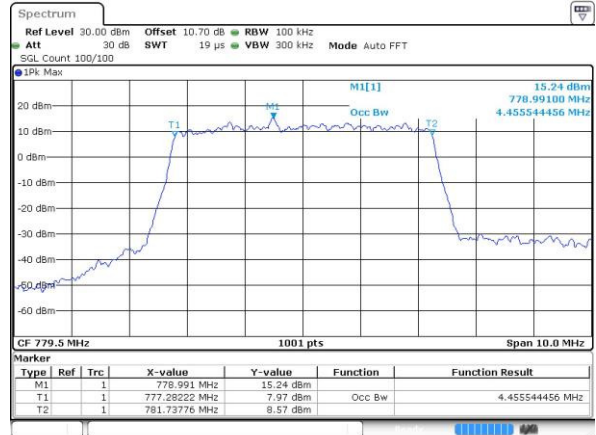


LTE Band 13

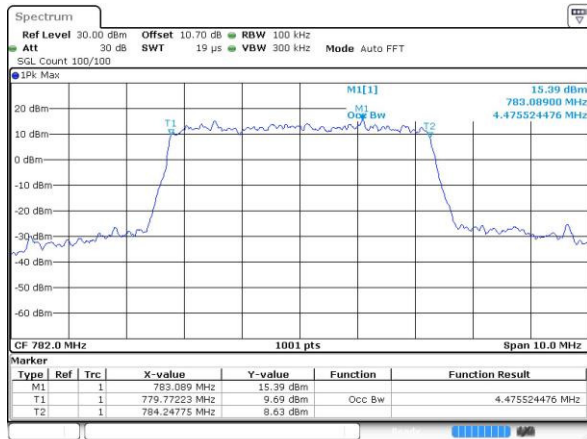
Lowest Channel / 5MHz / QPSK



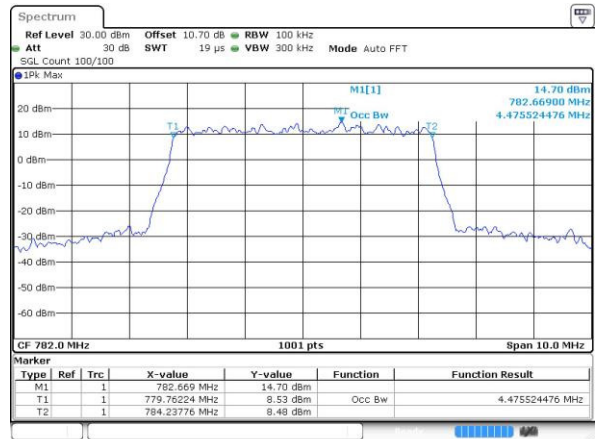
Lowest Channel / 5MHz / 16QAM



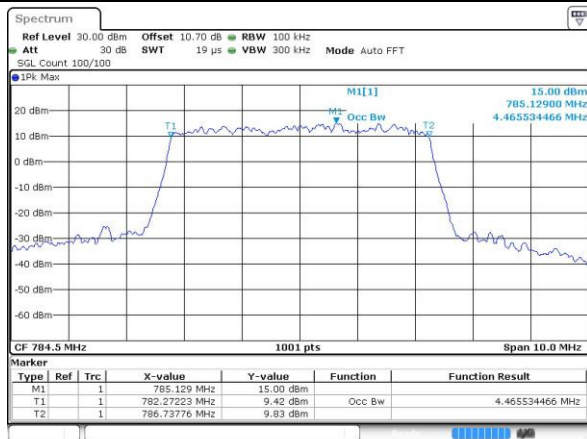
Middle Channel / 5MHz / QPSK



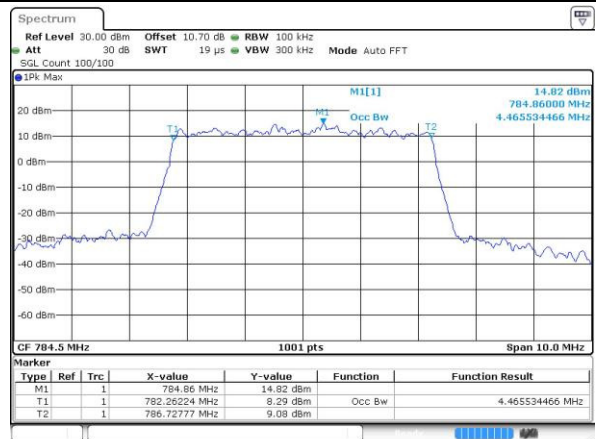
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK



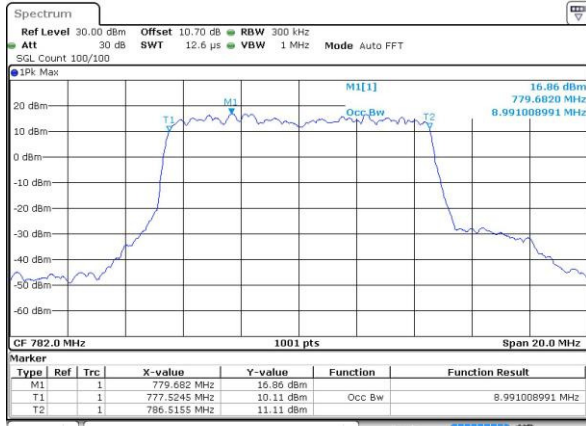
Highest Channel / 5MHz / 16QAM





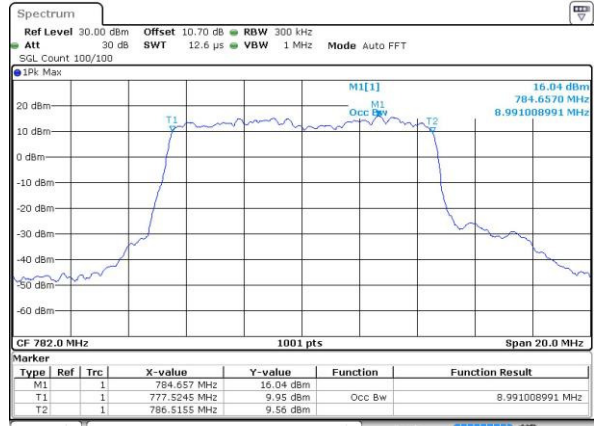
LTE Band 13

Middle Channel / 10MHz / QPSK



Date: 24 MAY 2016 17:57:51

Middle Channel / 10MHz / 16QAM



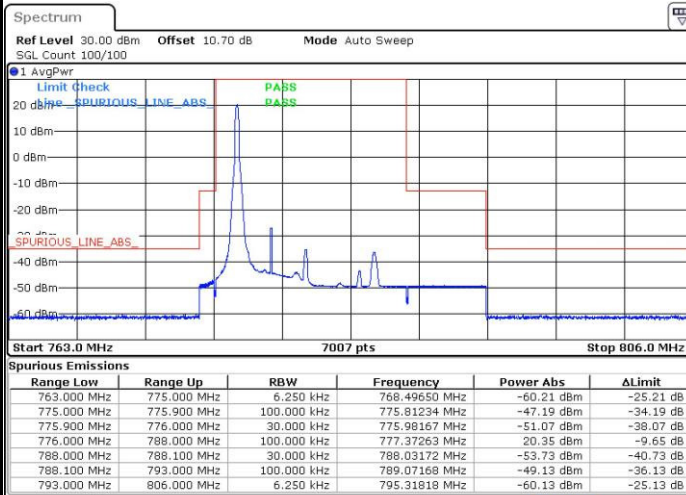
Date: 24 MAY 2016 17:58:01



Conducted Band Edge

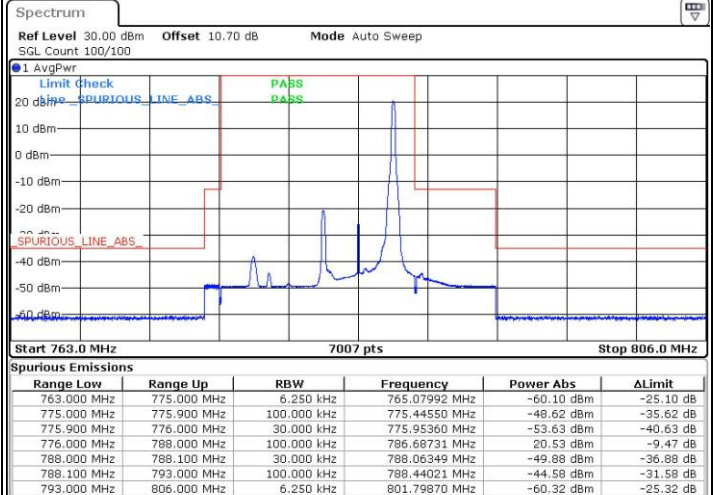
LTE Band 13 / 5MHz / QPSK

Lowest Band Edge / 1 RB



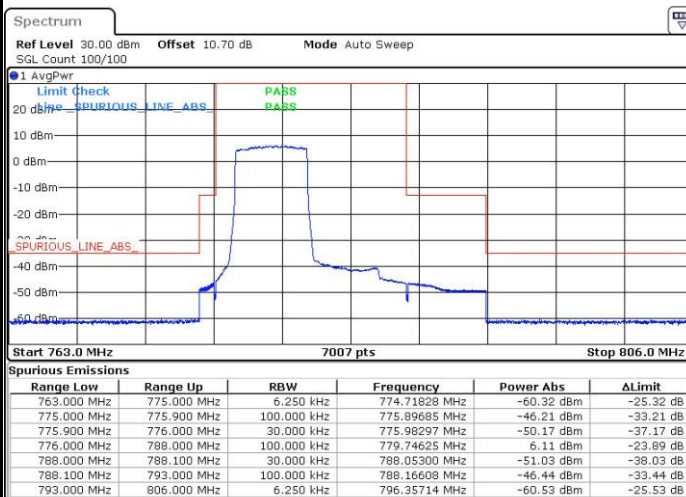
Date: 24.MAY.2016 17:46:13

Highest Band Edge / 1 RB



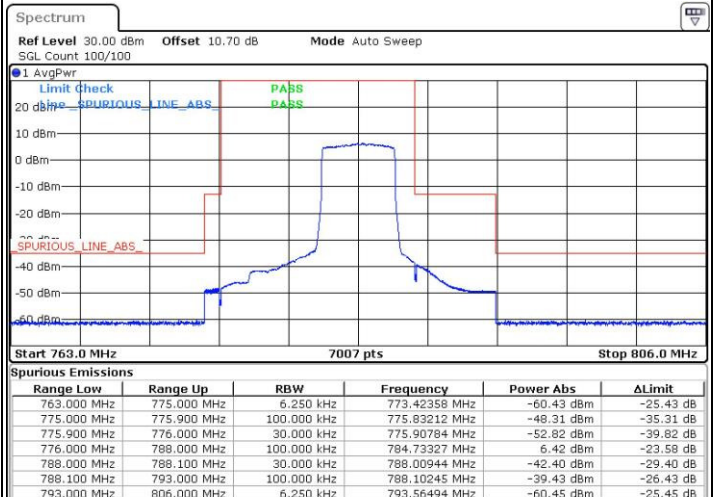
Date: 24.MAY.2016 17:55:52

Lowest Band Edge / Full RB



Date: 24.MAY.2016 17:42:45

Highest Band Edge / Full RB

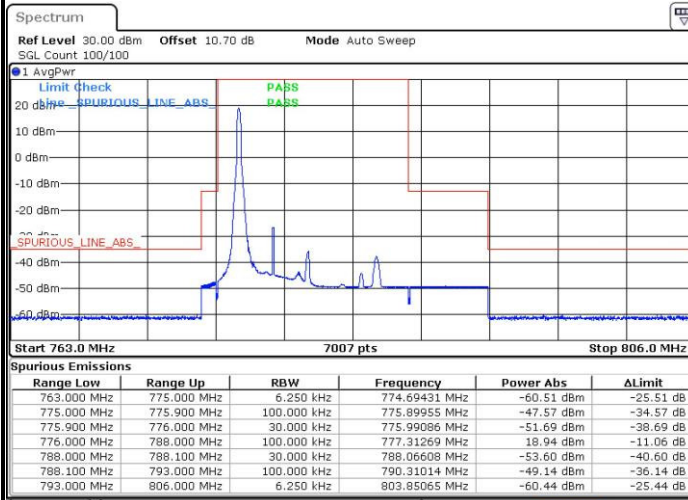


Date: 24.MAY.2016 17:52:23



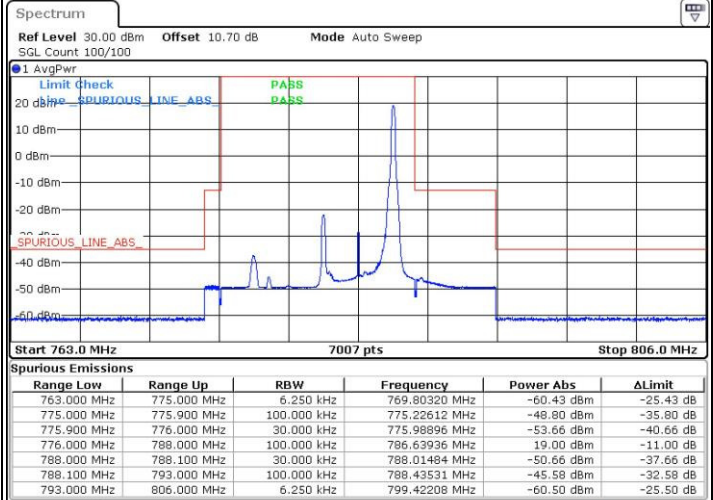
LTE Band 13 / 5MHz / 16QAM

Lowest Band Edge / 1 RB



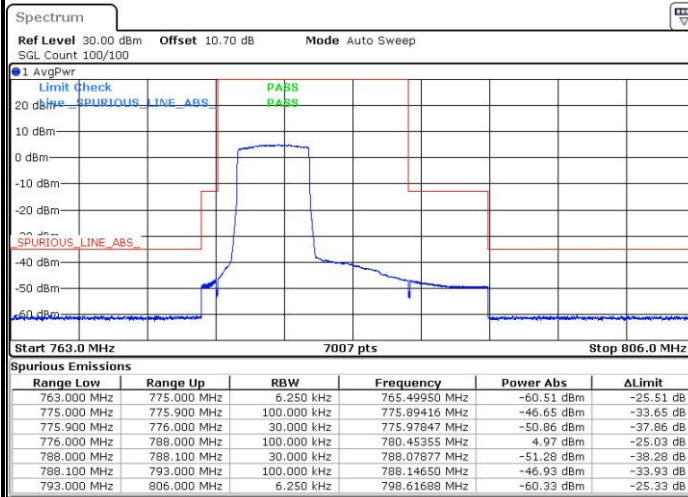
Date: 24 MAY 2016 17:45:04

Highest Band Edge / 1 RB



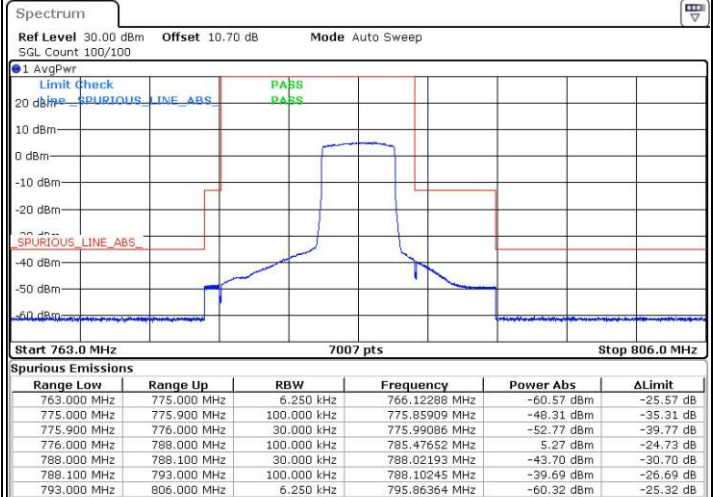
Date: 24 MAY 2016 17:54:42

Lowest Band Edge / Full RB



Date: 24 MAY 2016 17:43:54

Highest Band Edge / Full RB

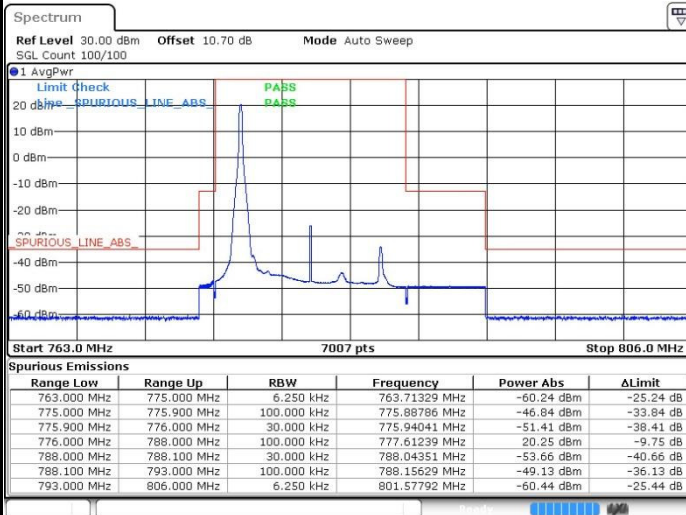


Date: 24 MAY 2016 17:53:33



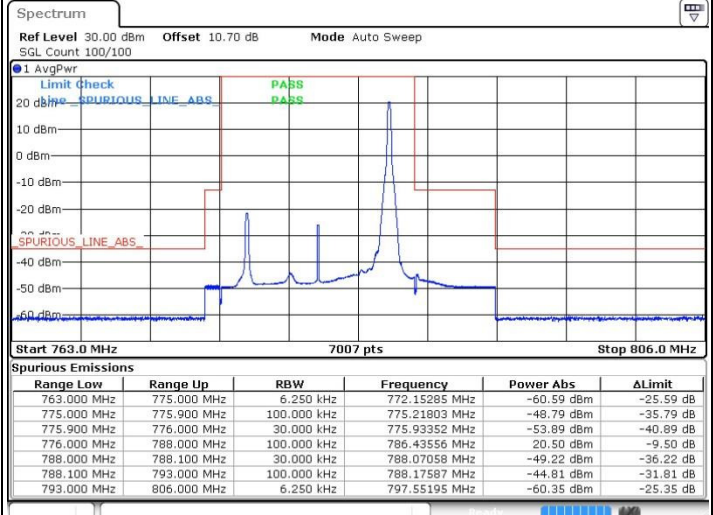
LTE Band 13 / 10MHz / QPSK

Lowest Band Edge / 1 RB



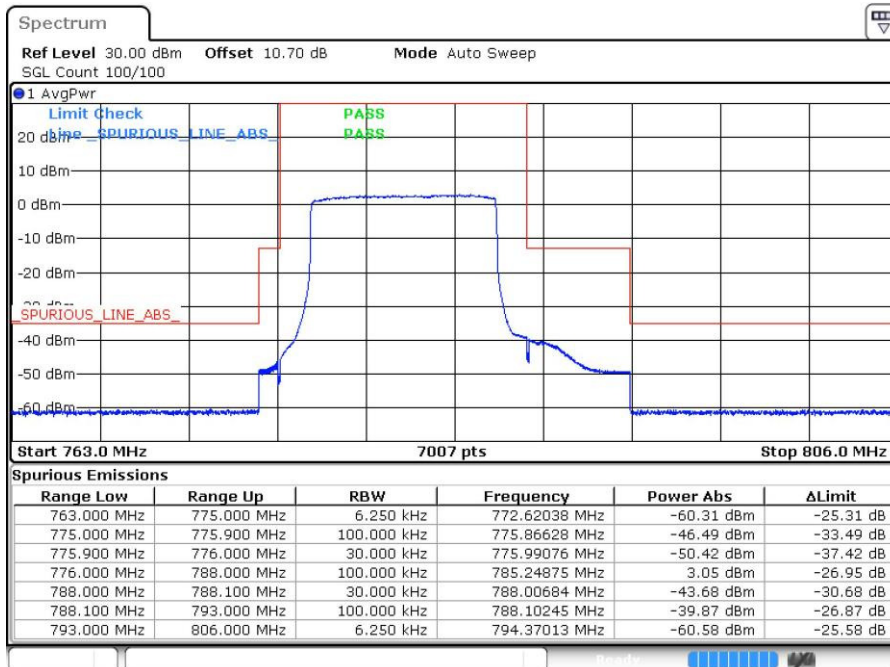
Date: 24 MAY.2016 18:02:59

Highest Band Edge / 1 RB



Date: 24 MAY.2016 18:04:09

Band Edge / Full RB

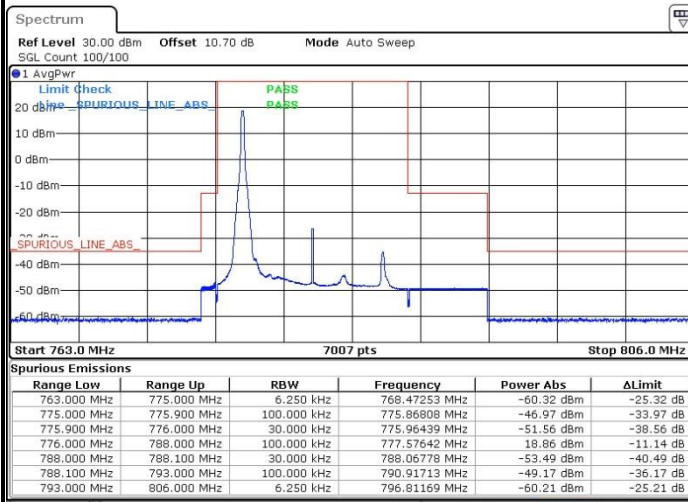


Date: 24 MAY 2016 17:59:31



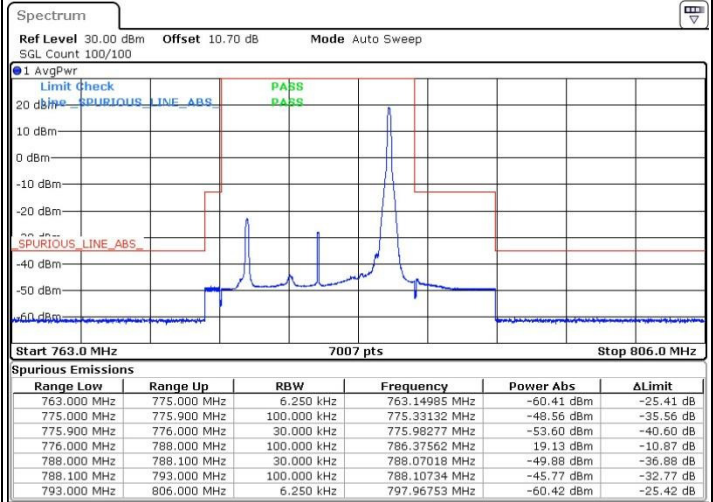
LTE Band 13 / 10MHz / 16QAM

Lowest Band Edge / 1 RB



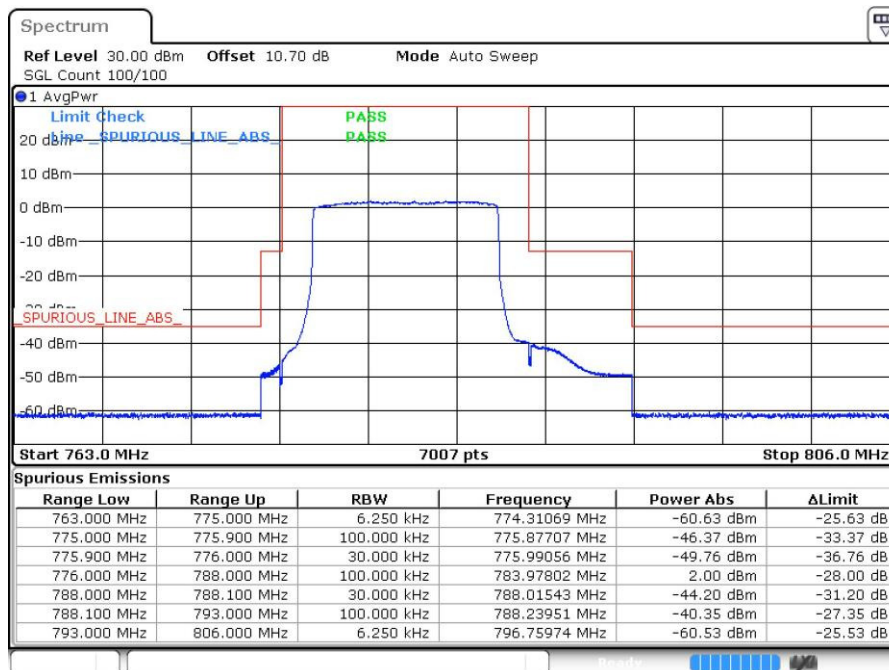
Date: 24 MAY 2016 18:01:50

Highest Band Edge / 1 RB



Date: 24 MAY 2016 18:05:18

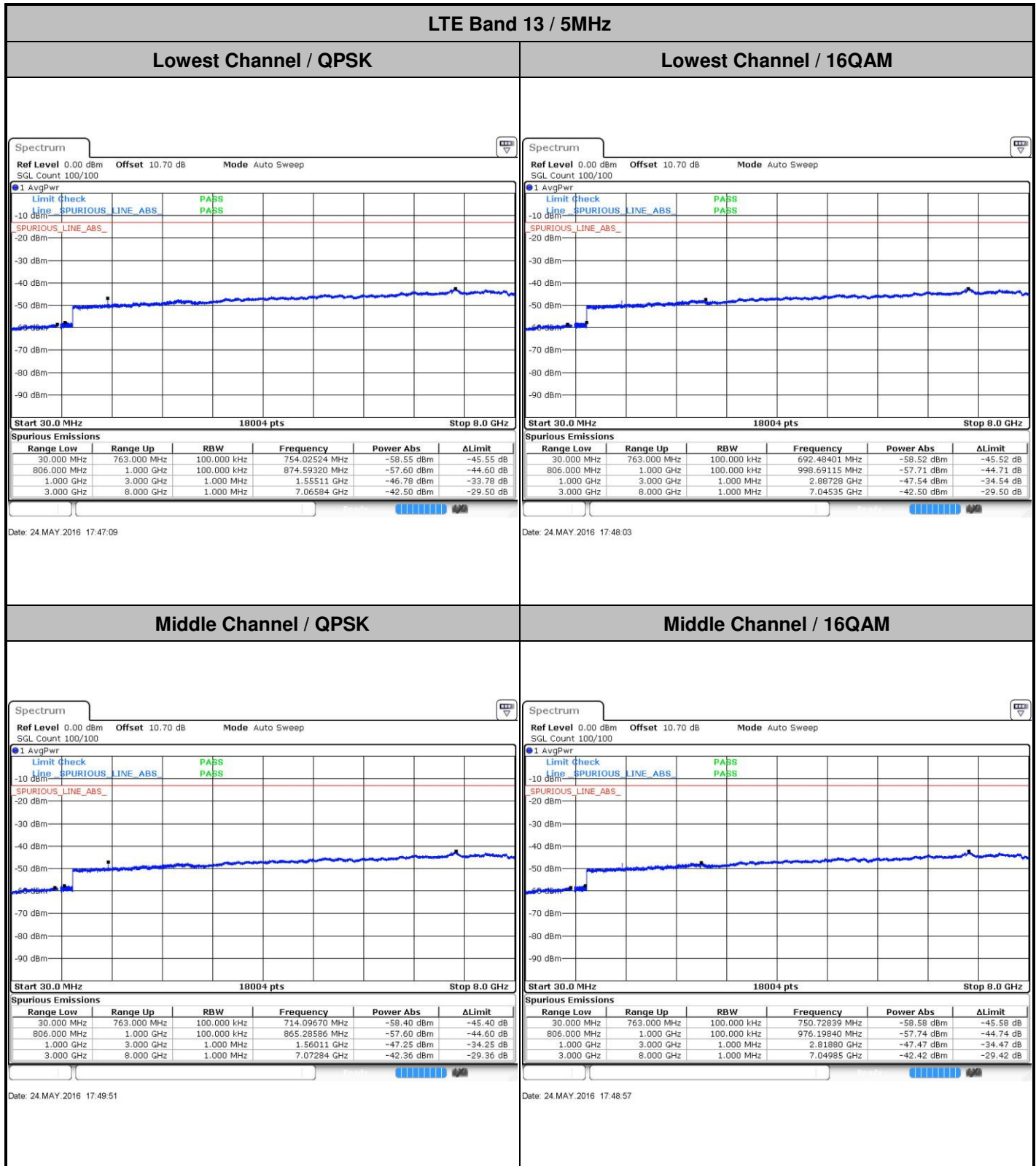
Band Edge / Full RB



Date: 24 MAY 2016 18:00:40



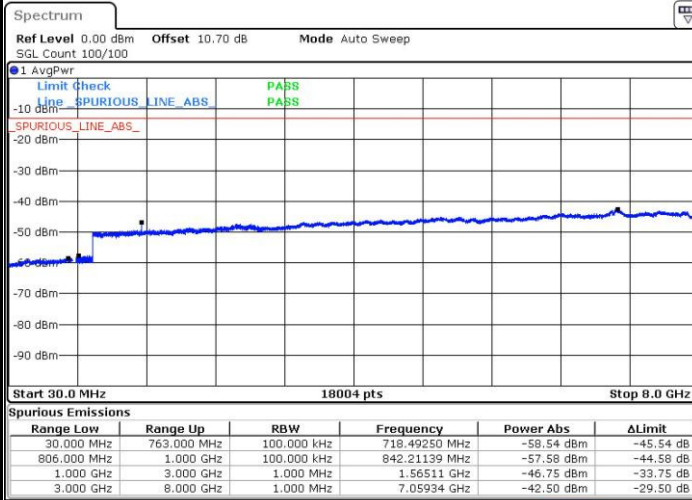
Conducted Spurious Emission





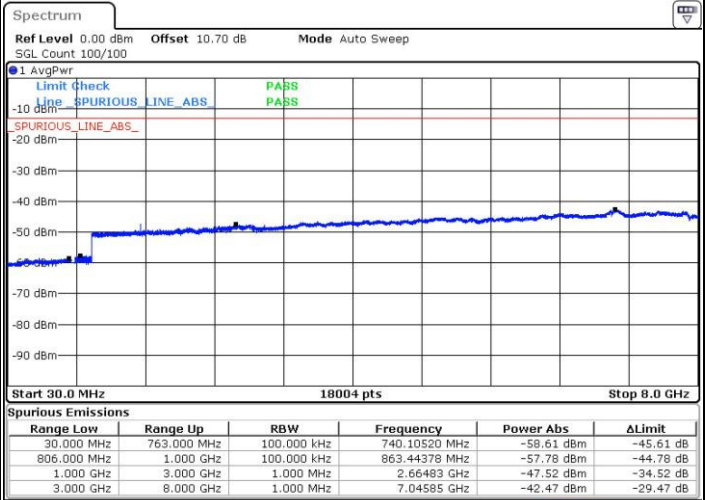
LTE Band 13 / 5MHz

Highest Channel / QPSK



Date: 24 MAY 2016 17:56:47

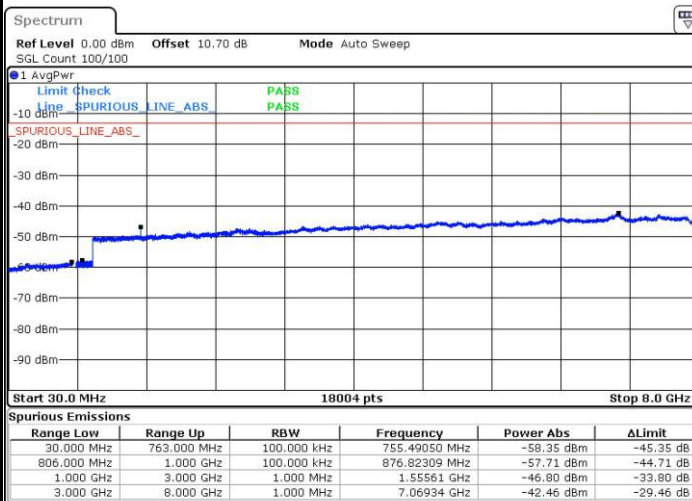
Highest Channel / 16QAM



Date: 24 MAY 2016 17:57:41

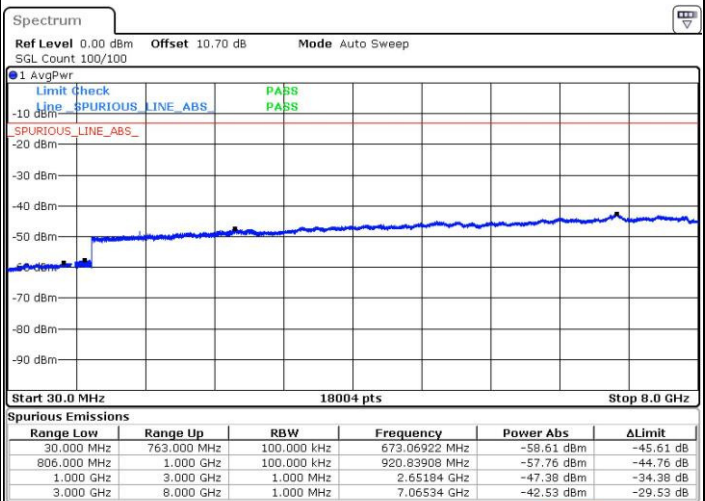
LTE Band 13 / 10MHz

Middle Channel / QPSK



Date: 24 MAY 2016 18:07:07

Middle Channel / 16QAM



Date: 24 MAY 2016 18:06:13

Frequency Stability

Test Conditions		LTE Band 13 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0015	PASS
40	Normal Voltage	0.0106	
30	Normal Voltage	0.0105	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0005	
0	Normal Voltage	0.0107	
-10	Normal Voltage	0.0004	
-20	Normal Voltage	0.0005	
-30	Normal Voltage	0.0086	
20	Maximum Voltage	0.0092	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0008	

Note:

1. Normal Voltage = 3.9 V. ; Battery End Point (BEP) = 3.4 V. ; Maximum Voltage =4.35 V.
2. The frequency fundamental emissions stay within the authorized frequency block.



Appendix B. Test Results of Radiated Test

ERP/EIRP

LTE Band 2 / 1.4MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	20.56	0.1138	23.68	0.2333
Middle		1	0	19.77	0.0948	23.12	0.2051
Highest		1	0	20.31	0.1074	23.92	0.2466
Lowest	16QAM	3	3	19.28	0.0847	22.29	0.1694
Middle		3	3	19.40	0.0871	22.72	0.1871
Highest		3	3	20.01	0.1002	23.54	0.2259
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 3MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	21.25	0.1334	23.82	0.2410
Middle		1	0	20.75	0.1189	23.71	0.2350
Highest		1	0	21.04	0.1271	24.20	0.2630
Lowest	16QAM	1	0	20.09	0.1021	22.97	0.1982
Middle		1	0	18.74	0.0748	22.03	0.1596
Highest		1	0	19.29	0.0849	22.79	0.1901
Limit	EIRP < 2W			Result		PASS	



LTE Band 2 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	20.48	0.1117	23.73	0.2360
Middle		1	0	20.26	0.1062	23.53	0.2254
Highest		1	0	20.65	0.1161	23.83	0.2415
Lowest	16QAM	1	0	20.00	0.1000	22.67	0.1849
Middle		1	0	19.40	0.0871	22.30	0.1698
Highest		1	0	19.23	0.0838	22.30	0.1698
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	20.57	0.1140	23.72	0.2355
Middle		1	0	20.48	0.1117	23.60	0.2291
Highest		1	0	20.69	0.1172	23.81	0.2404
Lowest	16QAM	1	0	20.21	0.1050	22.92	0.1959
Middle		1	0	19.44	0.0879	22.19	0.1656
Highest		1	0	19.71	0.0935	22.68	0.1854
Limit	EIRP < 2W			Result		PASS	

LTE Band 2 / 15MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	37	20.86	0.1219	23.93	0.2472
Middle		1	37	20.33	0.1079	23.59	0.2286
Highest		1	37	21.09	0.1285	23.83	0.2415
Lowest	16QAM	1	0	19.76	0.0946	22.30	0.1698
Middle		1	0	20.02	0.1005	22.93	0.1963
Highest		1	0	19.39	0.0869	22.28	0.1690
Limit	EIRP < 2W			Result		PASS	



LTE Band 2 / 20MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	20.71	0.1178	23.44	0.2208
Middle		1	0	20.39	0.1094	23.58	0.2280
Highest		1	0	20.34	0.1081	23.54	0.2259
Lowest	16QAM	1	0	19.71	0.0935	22.24	0.1675
Middle		1	0	19.39	0.0869	22.50	0.1778
Highest		1	0	19.29	0.0849	22.48	0.1770
Limit	EIRP < 2W			Result		PASS	



LTE Band 4 / 1.4MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	19.26	0.0843	21.80	0.1514
Middle		1	0	19.39	0.0869	22.32	0.1706
Highest		1	0	19.79	0.0953	22.41	0.1742
Lowest	16QAM	1	0	18.42	0.0695	20.55	0.1135
Middle		1	0	17.93	0.0621	20.31	0.1074
Highest		1	0	18.07	0.0641	20.56	0.1138
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 3MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	19.20	0.0832	21.79	0.1510
Middle		1	0	19.86	0.0968	22.59	0.1816
Highest		1	0	19.76	0.0946	22.48	0.1770
Lowest	16QAM	1	0	17.76	0.0597	20.22	0.1052
Middle		1	0	18.82	0.0762	21.33	0.1358
Highest		1	0	17.99	0.0630	20.59	0.1146
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	12	19.66	0.0925	22.41	0.1742
Middle		1	12	19.64	0.0920	22.30	0.1698
Highest		1	12	20.48	0.1117	23.18	0.2080
Lowest	16QAM	1	0	17.51	0.0564	19.68	0.0929
Middle		1	0	18.36	0.0685	20.98	0.1253
Highest		1	0	18.61	0.0726	20.83	0.1211
Limit	EIRP < 1W			Result		PASS	



LTE Band 4/ 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	19.35	0.0861	22.06	0.1607
Middle		1	0	19.73	0.0940	22.40	0.1738
Highest		1	0	19.91	0.0979	22.53	0.1791
Lowest	16QAM	1	0	18.12	0.0649	20.94	0.1242
Middle		1	0	17.96	0.0625	20.44	0.1107
Highest		1	0	17.84	0.0608	20.35	0.1084
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 15MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	0	19.05	0.0804	21.97	0.1574
Middle		1	0	19.43	0.0877	22.01	0.1589
Highest		1	0	19.64	0.0920	22.54	0.1795
Lowest	16QAM	1	0	17.65	0.0582	20.22	0.1052
Middle		1	0	18.47	0.0703	21.09	0.1285
Highest		1	0	17.93	0.0621	20.55	0.1135
Limit	EIRP < 1W			Result		PASS	

LTE Band 4 / 20MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	QPSK	1	49	19.20	0.0832	21.85	0.1531
Middle		1	49	19.73	0.0940	22.41	0.1742
Highest		1	49	19.53	0.0897	22.21	0.1663
Lowest	16QAM	1	0	18.01	0.0632	20.80	0.1202
Middle		1	0	18.59	0.0723	21.16	0.1306
Highest		1	0	18.41	0.0693	20.99	0.1256
Limit	EIRP < 1W			Result		PASS	



LTE Band 5 / 5MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	3	3	17.44	0.0555	19.93	0.0984
Middle		3	3	17.20	0.0525	19.41	0.0873
Highest		3	3	17.28	0.0535	19.63	0.0918
Lowest	16QAM	1	0	14.07	0.0255	17.12	0.0515
Middle		1	0	13.04	0.0201	15.79	0.0379
Highest		1	0	14.59	0.0288	17.44	0.0555
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 10MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	8	17.29	0.0536	19.15	0.0822
Middle		1	8	17.09	0.0512	19.32	0.0855
Highest		1	8	17.03	0.0505	19.41	0.0873
Lowest	16QAM	1	0	14.15	0.0260	17.08	0.0511
Middle		1	0	15.25	0.0335	17.82	0.0605
Highest		1	0	13.51	0.0224	16.50	0.0447
Limit	ERP < 7W			Result		PASS	

LTE Band 5 / 15MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	12	17.78	0.0600	20.40	0.1096
Middle		1	12	17.33	0.0541	19.77	0.0948
Highest		1	12	17.42	0.0552	19.84	0.0964
Lowest	16QAM	1	12	14.17	0.0261	16.95	0.0495
Middle		1	12	15.07	0.0321	17.63	0.0579
Highest		1	12	13.75	0.0237	16.84	0.0483
Limit	ERP < 7W			Result		PASS	



LTE Band 5 / 20MHz (Average)							
Channel	Modulation	RB		Horizontal		Vertical	
		Size	Offset	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	QPSK	1	25	16.99	0.0500	19.56	0.0904
Middle		1	25	17.21	0.0526	19.68	0.0929
Highest		1	25	17.32	0.0540	20.08	0.1019
Lowest	16QAM	1	0	13.69	0.0234	16.30	0.0427
Middle		1	0	13.31	0.0214	16.30	0.0427
Highest		1	0	13.60	0.0229	16.30	0.0427
Limit	ERP < 7W			Result		PASS	