6 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.9**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**5.0**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	22.69	22.59	22.72
1.4	1	2		22.51	22.54	22.41
1.4	1	5		22.36	22.38	22.38
1.4	3	0		22.49	22.50	22.57
1.4	3	1		22.29	22.33	22.62
1.4	3	2		22.49	22.57	22.31
1.4	6	0		21.53	21.52	21.55
1.4	1	0	16-QAM	21.77	21.85	21.86
1.4	1	2		21.75	21.69	21.72
1.4	1	5		21.71	21.29	21.69
1.4	3	0		21.72	21.67	21.60
1.4	3	1		21.62	21.74	21.80
1.4	3	2		21.68	21.64	21.64
1.4	6	0		20.32	20.10	20.39
3	1	0	QPSK	22.63	22.55	22.59
3	1	7		22.52	22.47	22.55
3	1	14		22.38	22.43	22.46
3	8	0		21.54	21.52	21.48
3	8	4		21.60	21.58	21.65
3	8	7		21.56	21.54	21.66
3	15	0		21.48	21.47	21.48
3	1	0	16-QAM	21.87	21.85	21.90
3	1	7		21.81	21.79	21.88
3	1	14		21.86	21.72	21.78
3	8	0		20.70	20.38	20.33
3	8	4		20.70	20.67	20.41
3	8	7		20.70	20.40	20.62
3	15	0		20.63	20.31	20.57

LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	22.56	22.65	22.63
5	1	12		22.45	22.33	22.57
5	1	24		22.37	22.28	22.36
5	12	0		21.52	21.44	21.50
5	12	6		21.56	21.50	21.52
5	12	11		21.54	21.45	21.54
5	25	0		21.49	21.40	21.46
5	1	0	16-QAM	21.83	21.83	21.78
5	1	12		21.80	21.75	21.75
5	1	24		21.74	21.61	21.57
5	12	0		20.46	20.42	20.39
5	12	6		20.50	20.47	20.44
5	12	11		20.44	20.43	20.44
5	25	0		20.55	20.45	20.57
10	1	0	QPSK	**22.73**	22.42	22.59
10	1	24		22.52	22.41	22.45
10	1	49		22.43	22.32	22.47
10	25	0		21.43	21.54	21.51
10	25	12		21.50	21.45	21.49
10	25	24		21.60	21.43	21.47
10	50	0		21.48	21.41	21.47
10	1	0	16-QAM	21.81	21.74	21.88
10	1	24		21.78	21.65	21.87
10	1	49		21.70	21.63	21.62
10	25	0		20.51	20.45	20.45
10	25	12		20.63	20.52	20.47
10	25	24		20.78	20.49	20.49
10	50	0		20.41	20.42	20.31

LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.04	22.81	23.02
5	1	12		22.99	22.74	22.98
5	1	24		22.72	22.48	22.72
5	12	0		21.64	21.58	21.57
5	12	6		21.55	21.53	21.67
5	12	11		21.66	21.58	21.71
5	25	0		21.68	21.59	21.66
5	1	0	16-QAM	21.90	22.39	22.17
5	1	12		21.84	21.86	22.00
5	1	24		21.74	21.80	21.82
5	12	0		20.48	20.59	20.69
5	12	6		20.50	20.48	20.55
5	12	11		20.57	20.44	20.69
5	25	0		20.57	20.49	20.72
10	1	0	QPSK	23.02	**23.15**	23.02
10	1	24		22.86	22.81	22.78
10	1	49		22.69	22.97	22.83
10	25	0		21.73	21.71	21.64
10	25	12		21.62	21.66	21.56
10	25	24		21.62	21.67	21.61
10	50	0		21.63	21.69	21.64
10	1	0	16-QAM	21.99	21.96	22.04
10	1	24		21.83	21.82	21.88
10	1	49		21.91	21.93	21.83
10	25	0		20.72	20.65	20.39
10	25	12		20.44	20.77	20.62
10	25	24		20.58	20.69	20.70
10	50	0		20.42	20.50	20.59

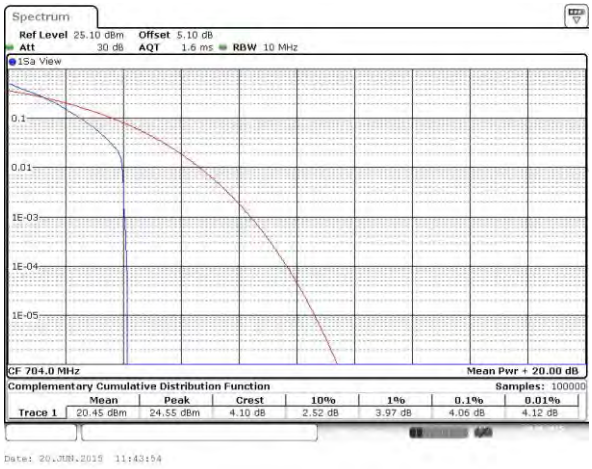
LTE Band 12

Peak-to-Average Ratio

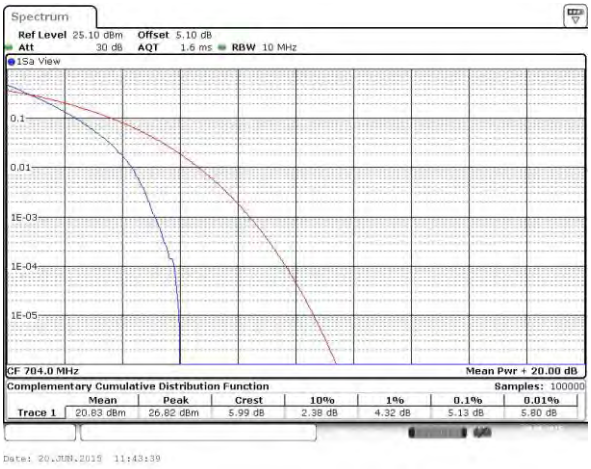
Mode	LTE Band 12 / 10MHz				
Mod.	QPSK		16QAM		Limit: 13dB
RB Size	1RB	Full RB	1RB	Full RB	Result
Lowest CH	4.06	5.13	4.99	6.00	PASS
Middle CH	4.29	4.99	5.36	5.88	
Highest CH	4.46	4.70	5.22	5.71	

LTE Band 12 / 10MHz / QPSK

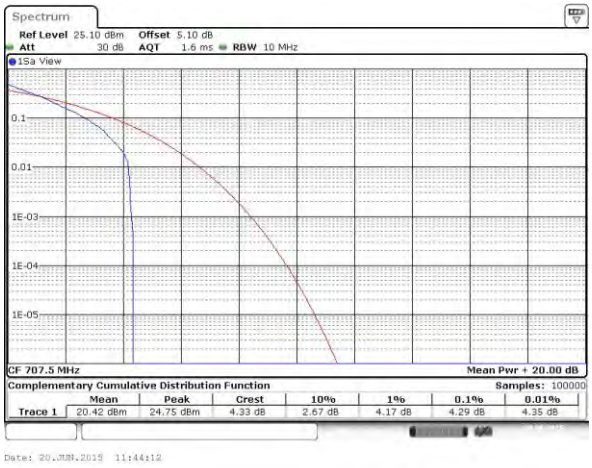
Lowest Channel / 1RB



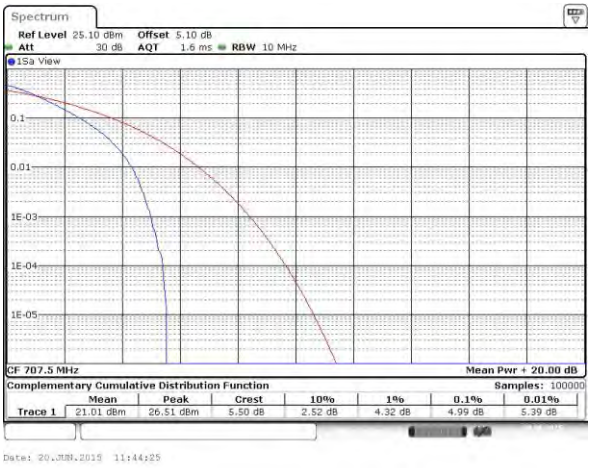
Lowest Channel / Full RB



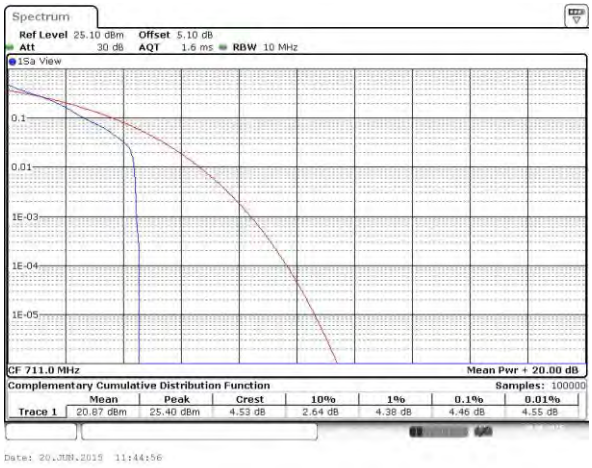
Middle Channel / 1RB



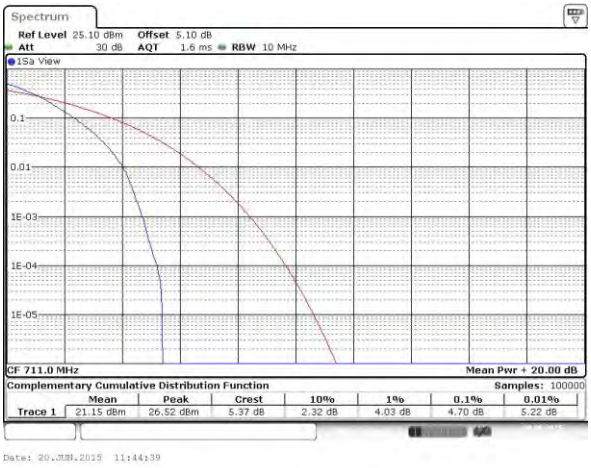
Middle Channel / Full RB



Highest Channel / 1RB

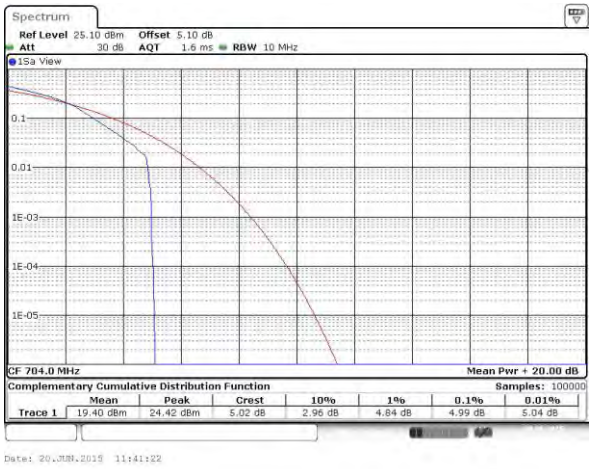


Highest Channel / Full RB

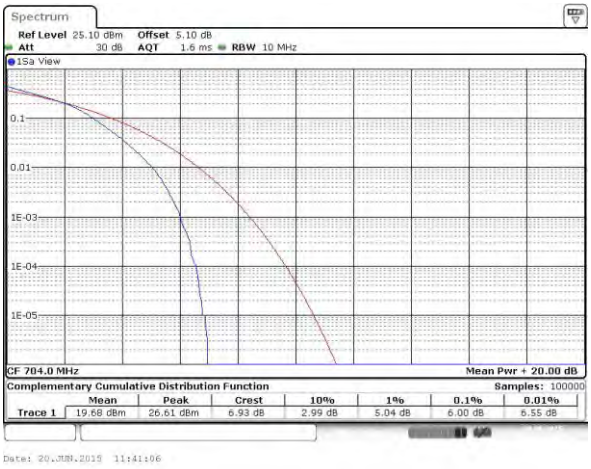


LTE Band 12 / 10MHz / 16QAM

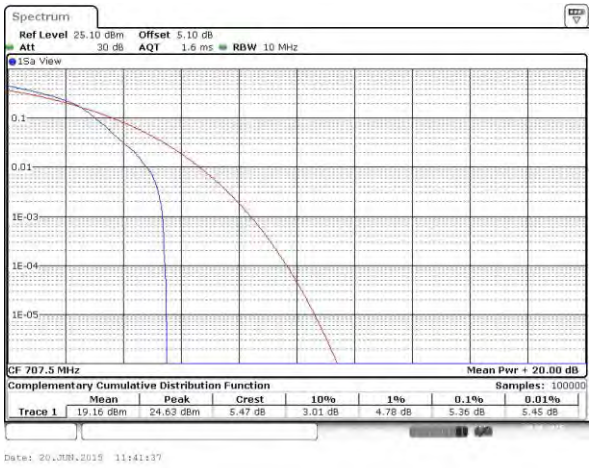
Lowest Channel / 1RB



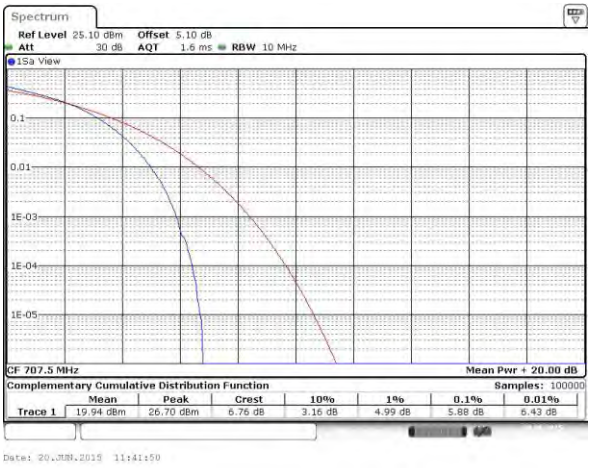
Lowest Channel / Full RB



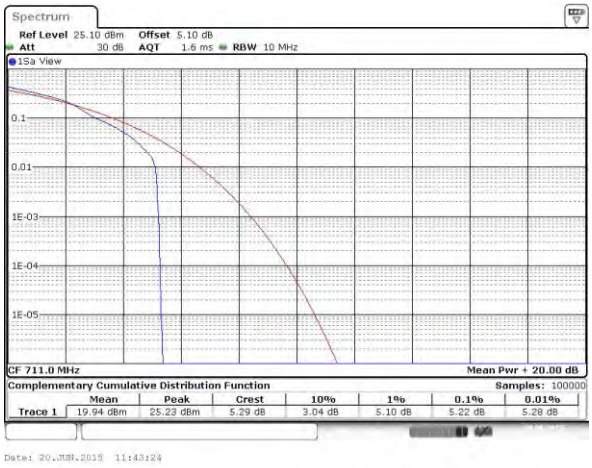
Middle Channel / 1RB



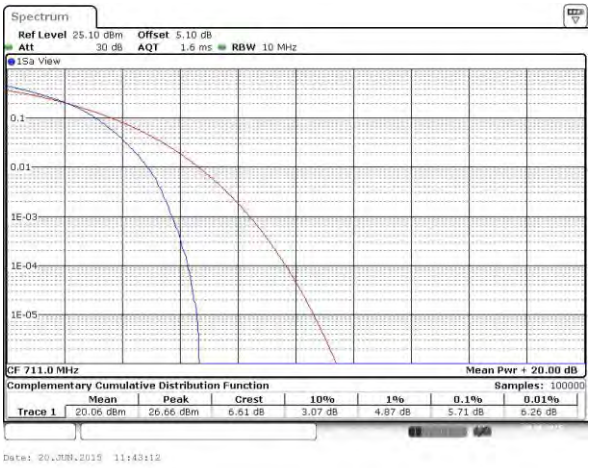
Middle Channel / Full RB



Highest Channel / 1RB



Highest Channel / Full RB

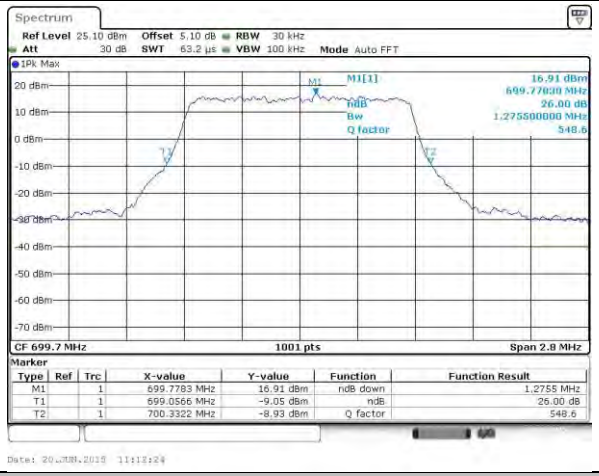


26dB Bandwidth

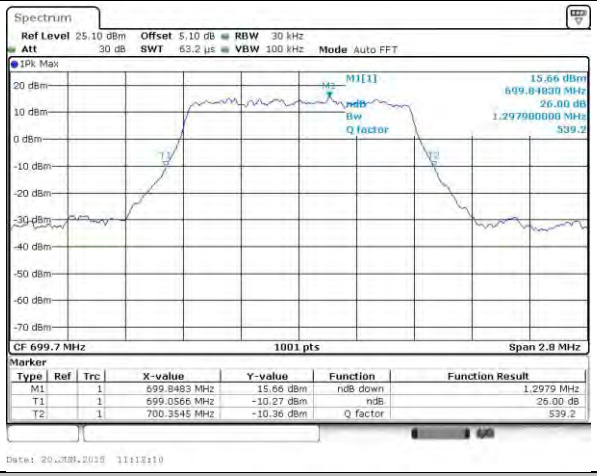
Mode	LTE Band 12 : 26dB BW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.28	1.30	3.05	3.06	5.03	5.05	9.97	9.93	-	-	-	-
Middle CH	1.28	1.29	3.04	3.09	5.02	5.22	9.95	9.93	-	-	-	-
Highest CH	1.28	1.30	3.05	3.06	5.69	5.03	10.01	9.99	-	-	-	-

LTE Band 12

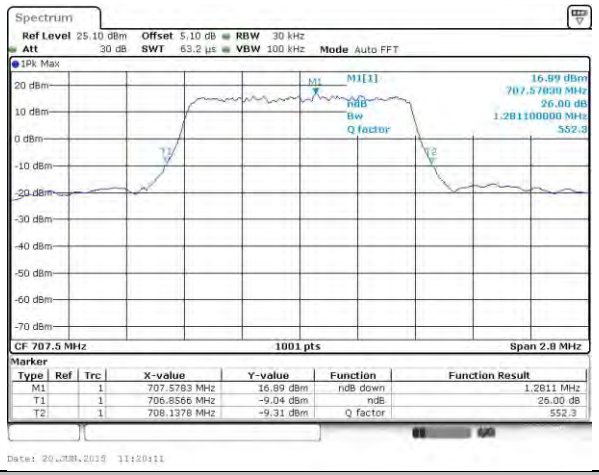
Lowest Channel / 1.4MHz / QPSK



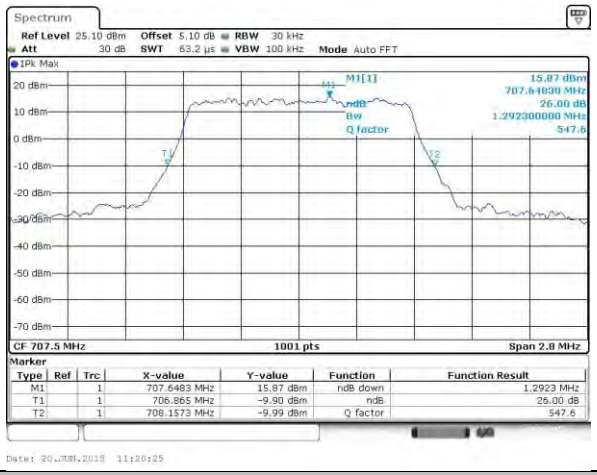
Lowest Channel / 1.4MHz / 16QAM



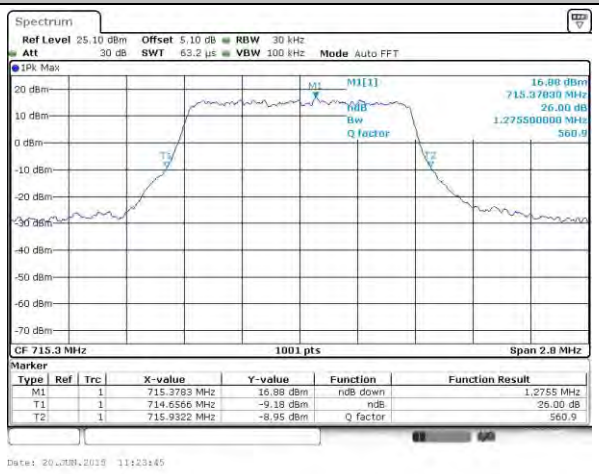
Middle Channel / 1.4MHz / QPSK



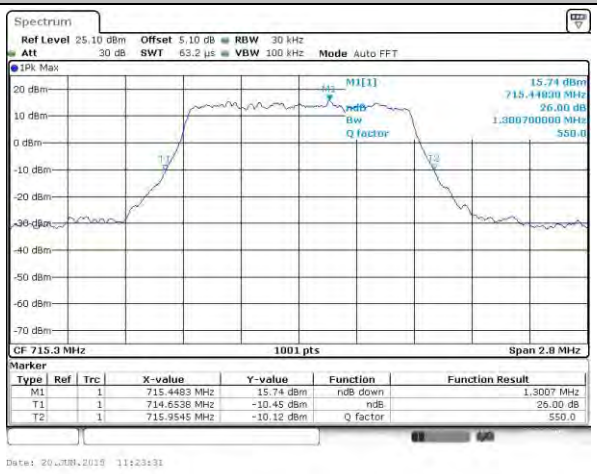
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

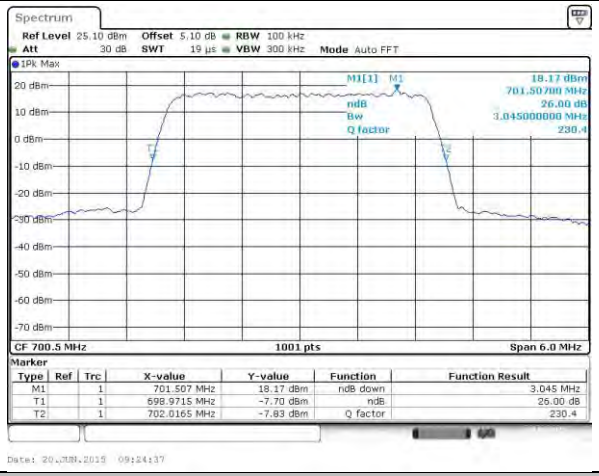


Highest Channel / 1.4MHz / 16QAM

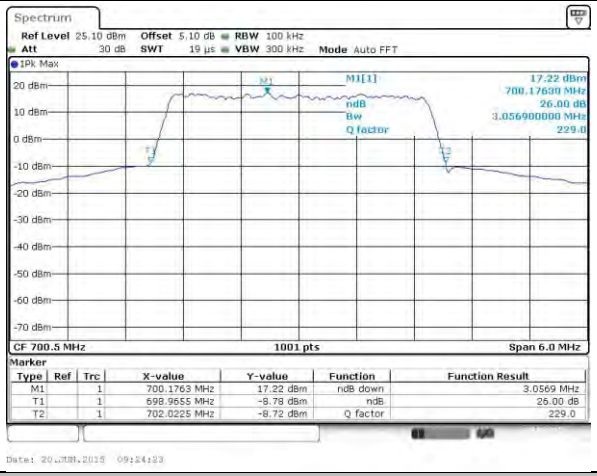


LTE Band 12

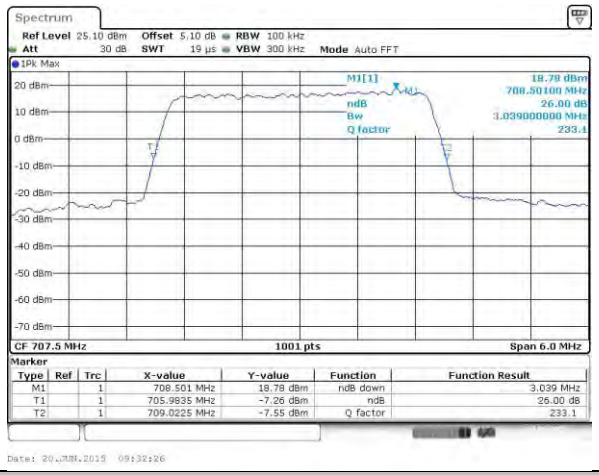
Lowest Channel / 3MHz / QPSK



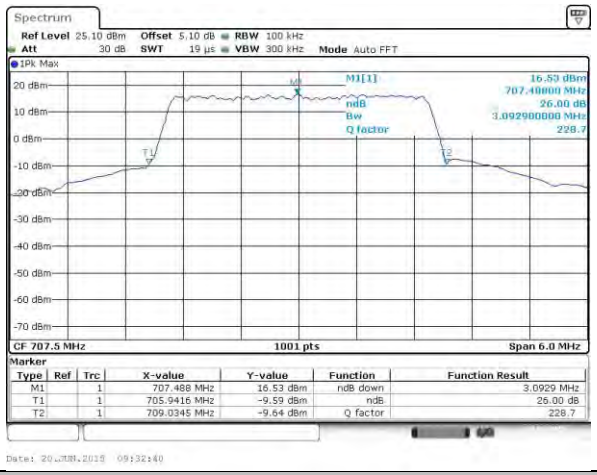
Lowest Channel / 3MHz / 16QAM



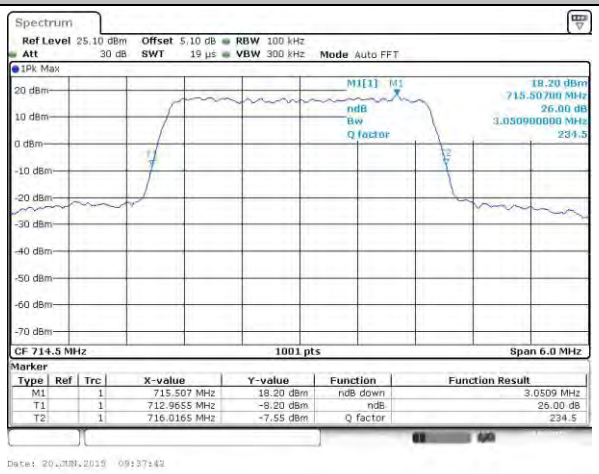
Middle Channel / 3MHz / QPSK



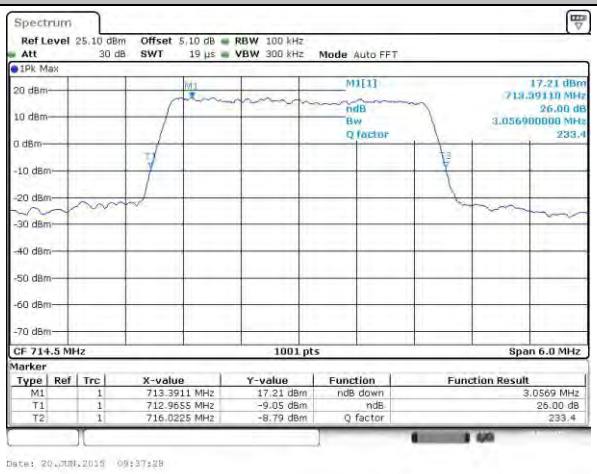
Middle Channel /3MHz / 16QAM



Highest Channel /3MHz / QPSK

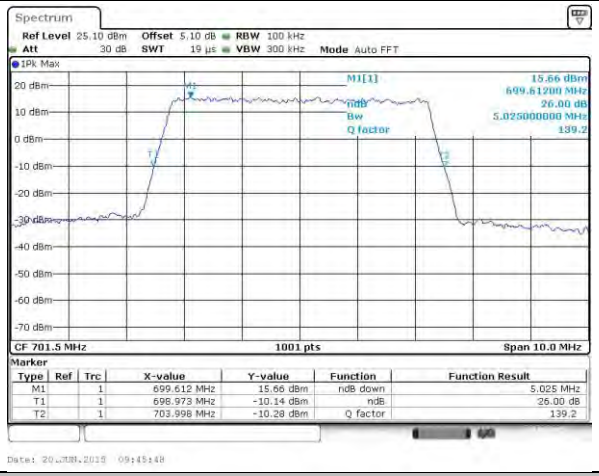


Highest Channel /3MHz / 16QAM



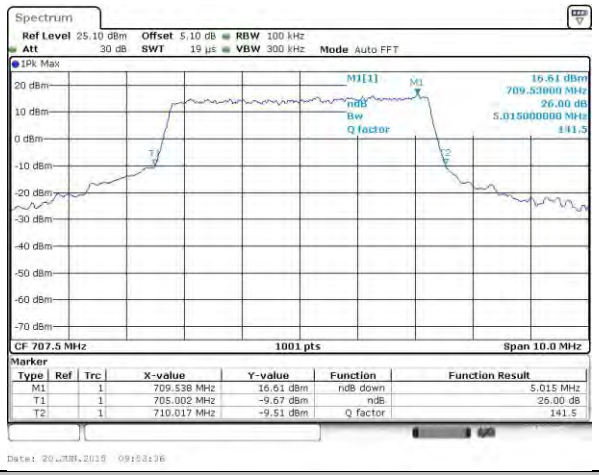
LTE Band 12

Lowest Channel / 5MHz / QPSK



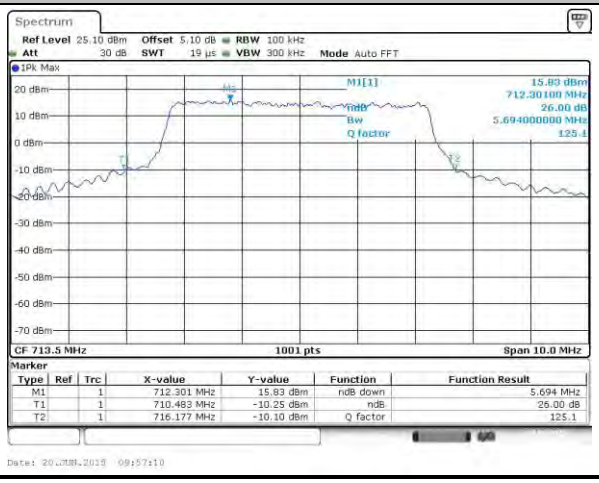
Lowest Channel / 5MHz / 16QAM

Middle Channel / 5MHz / QPSK



Middle Channel / 5MHz / 16QAM

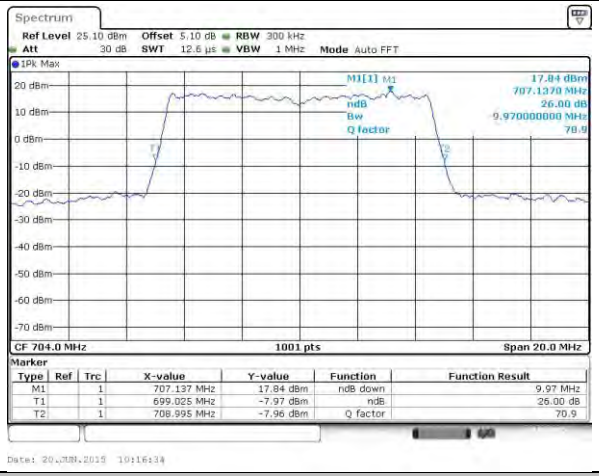
Highest Channel / 5MHz / QPSK



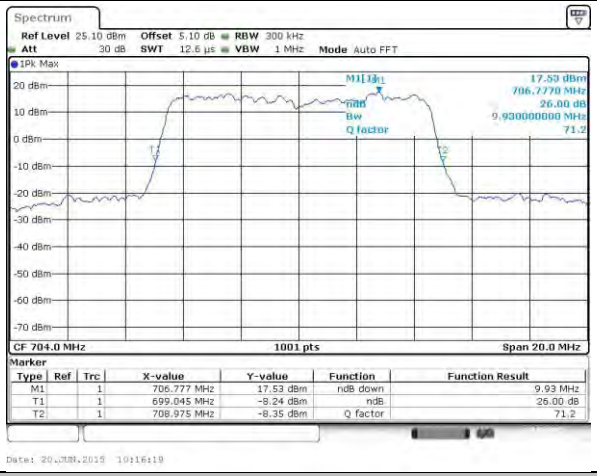
Highest Channel / 5MHz / 16QAM

LTE Band 12

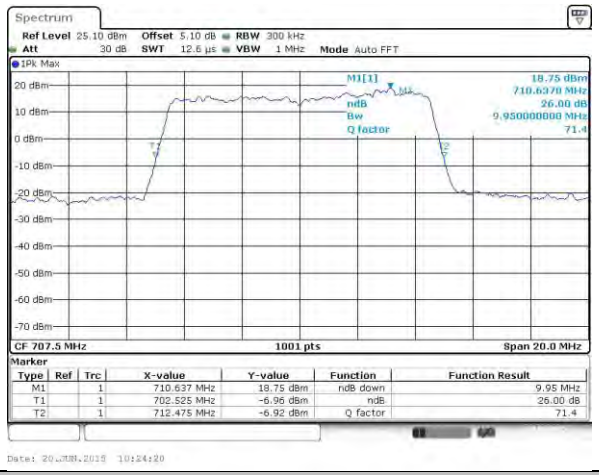
Lowest Channel / 10MHz / QPSK



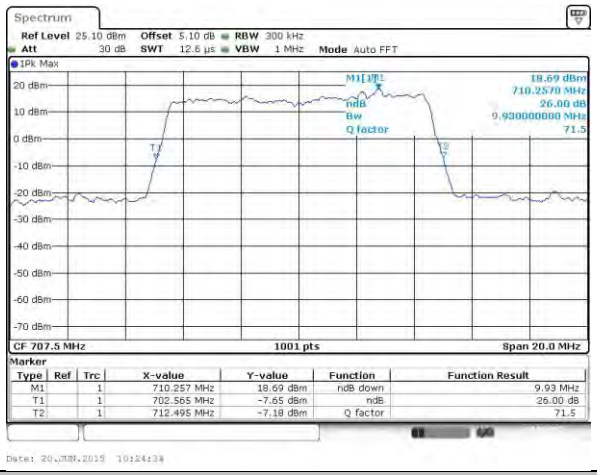
Lowest Channel / 10MHz / 16QAM



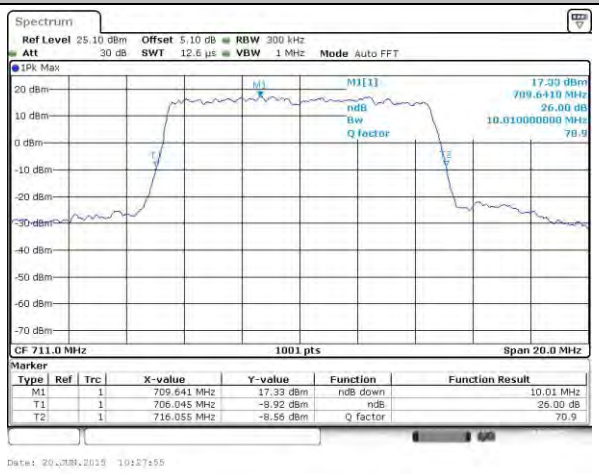
Middle Channel / 10MHz / QPSK



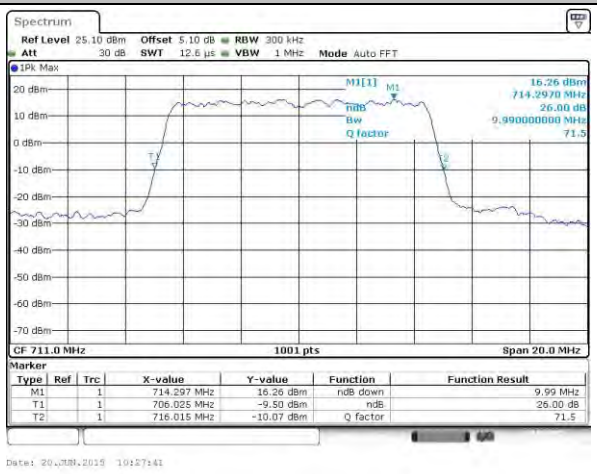
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



Highest Channel / 10MHz / 16QAM

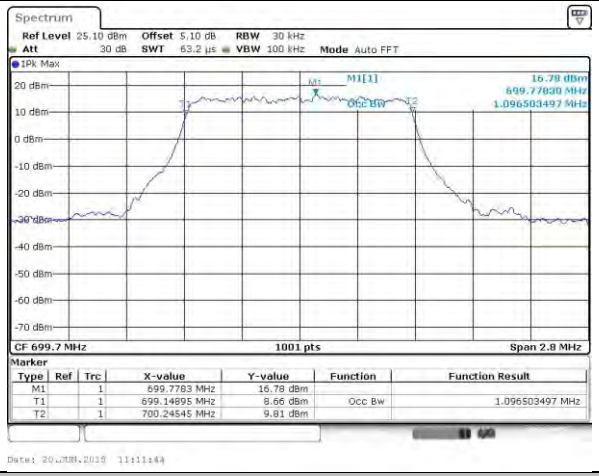


Occupied Bandwidth

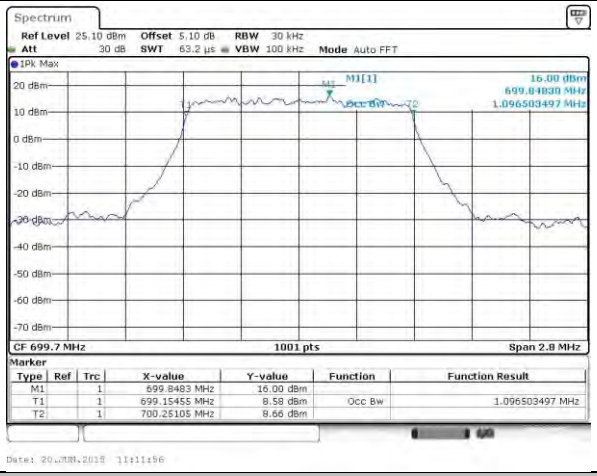
Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.10	1.10	2.73	2.73	4.50	4.50	9.15	9.07	-	-	-	-
Middle CH	1.10	1.10	2.73	2.73	4.50	4.50	9.07	9.03	-	-	-	-
Highest CH	1.10	1.10	2.73	2.72	4.52	4.52	9.07	9.01	-	-	-	-

LTE Band 12

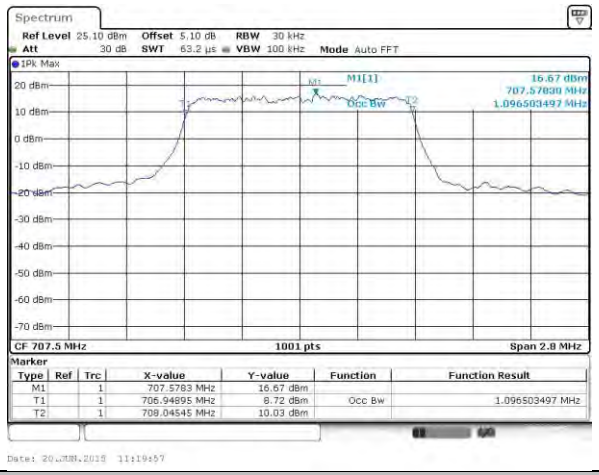
Lowest Channel / 1.4MHz / QPSK



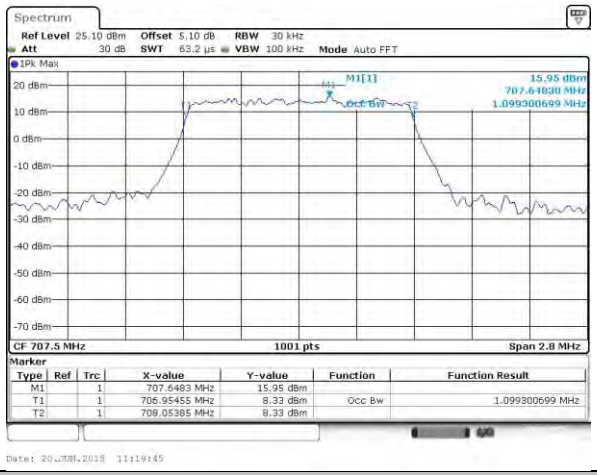
Lowest Channel / 1.4MHz / 16QAM



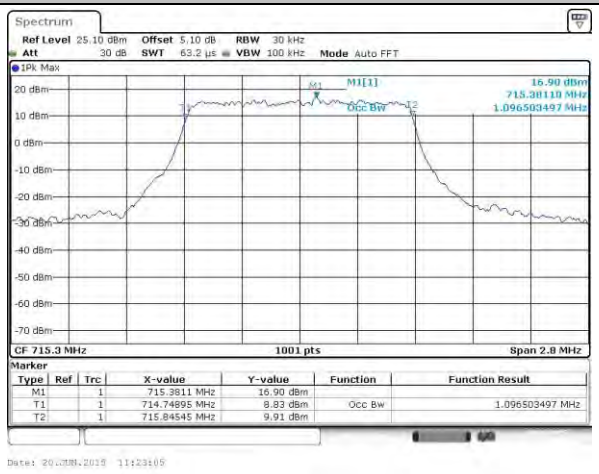
Middle Channel / 1.4MHz / QPSK



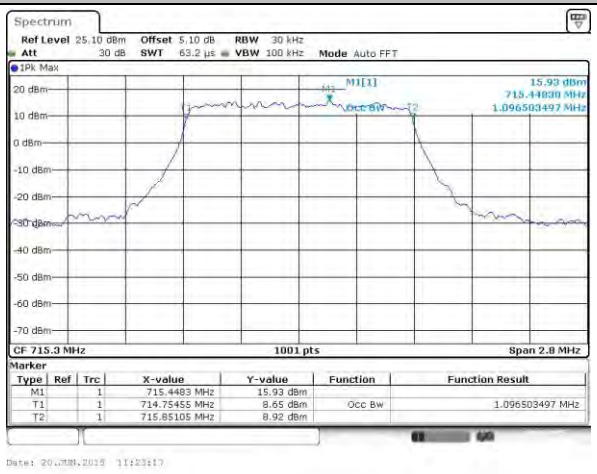
Middle Channel / 1.4MHz / 16QAM



Highest Channel / 1.4MHz / QPSK

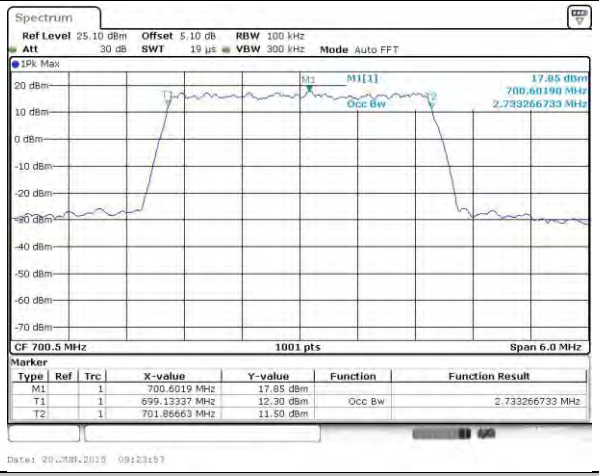


Highest Channel / 1.4MHz / 16QAM

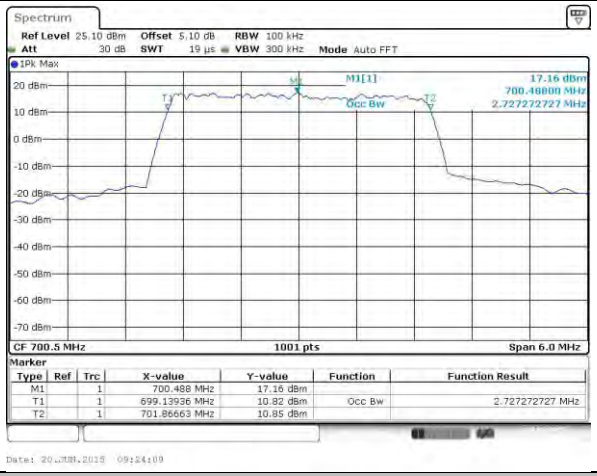


LTE Band 12

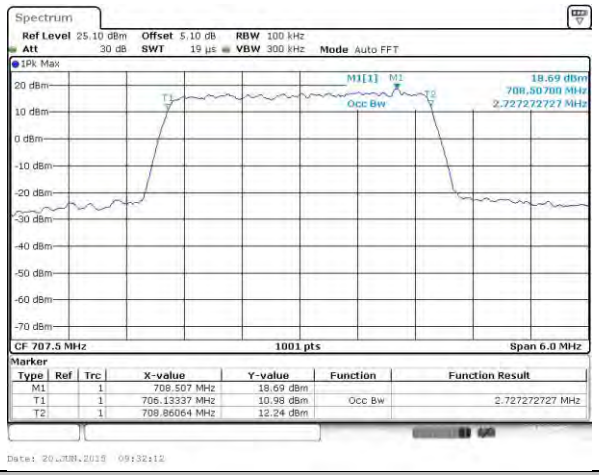
Lowest Channel / 3MHz / QPSK



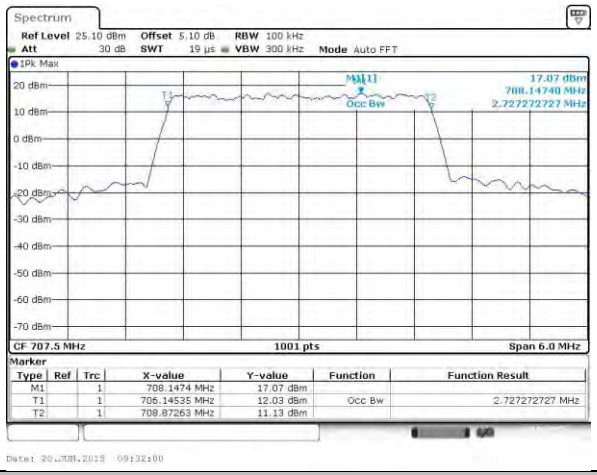
Lowest Channel / 3MHz / 16QAM



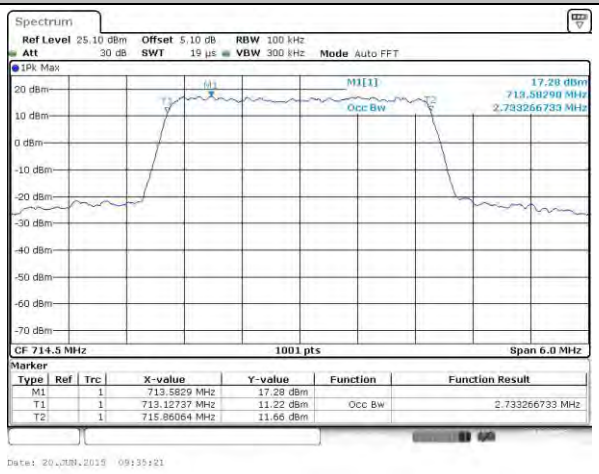
Middle Channel / 3MHz / QPSK



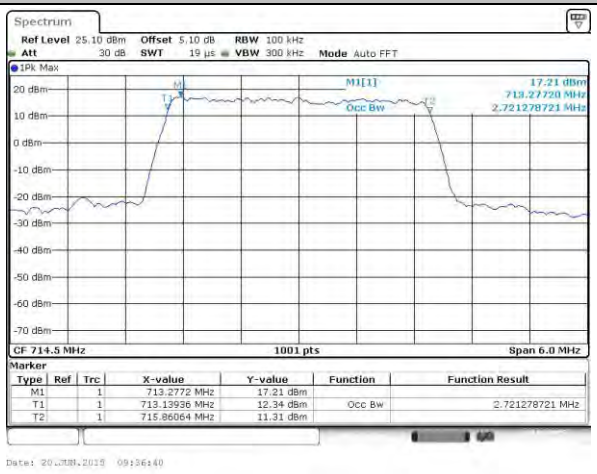
Middle Channel / 3MHz / 16QAM



Highest Channel / 3MHz / QPSK

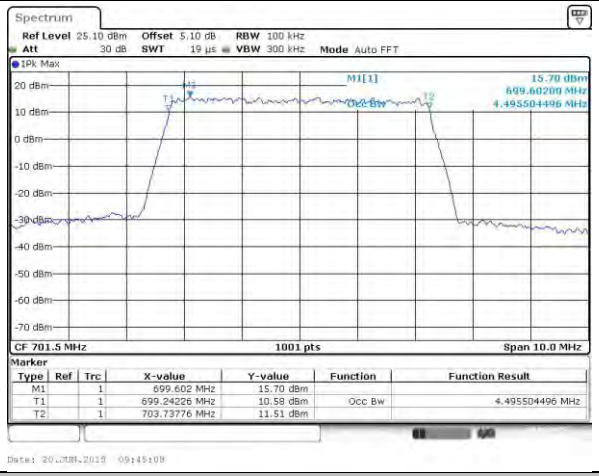


Highest Channel / 3MHz / 16QAM

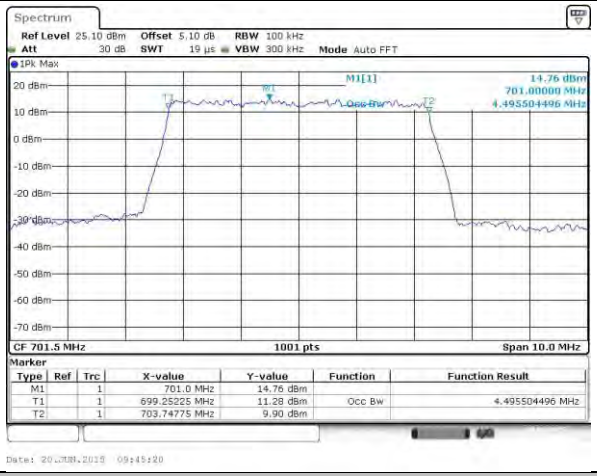


LTE Band 12

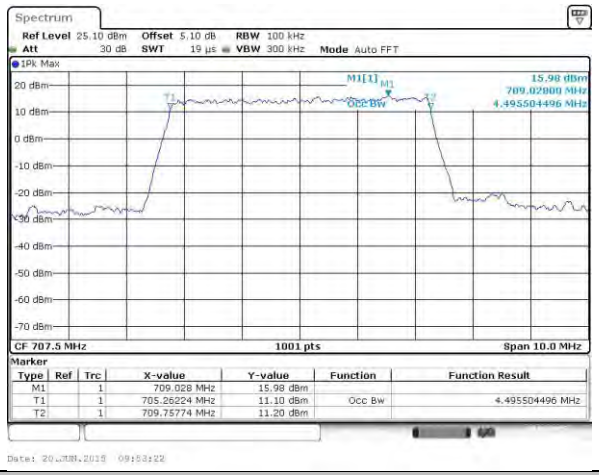
Lowest Channel / 5MHz / QPSK



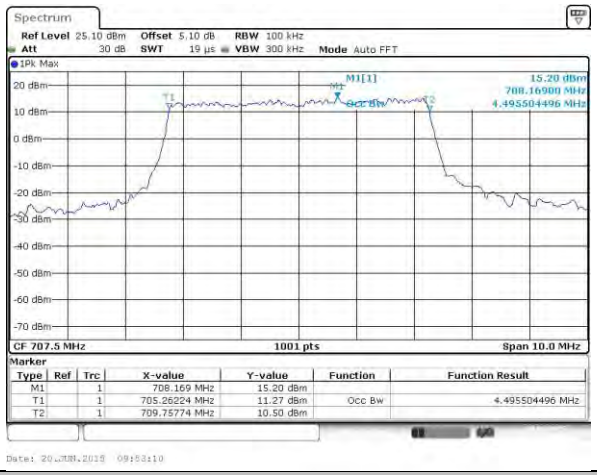
Lowest Channel / 5MHz / 16QAM



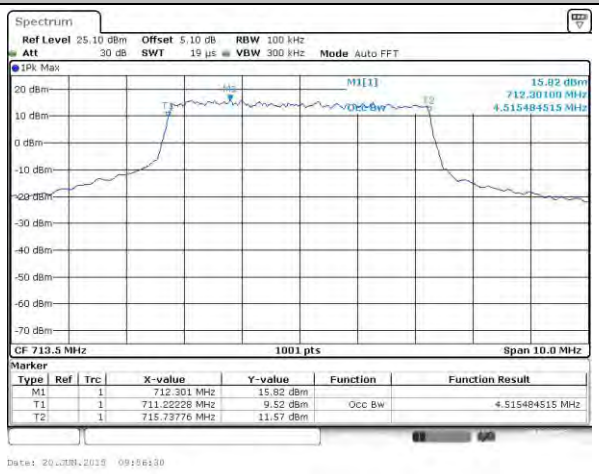
Middle Channel / 5MHz / QPSK



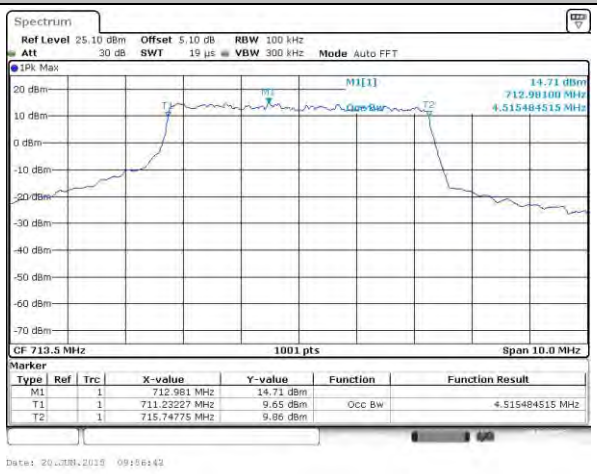
Middle Channel / 5MHz / 16QAM



Highest Channel / 5MHz / QPSK

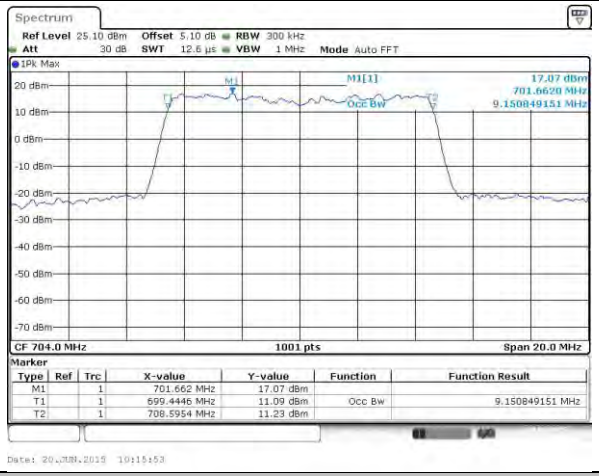


Highest Channel / 5MHz / 16QAM

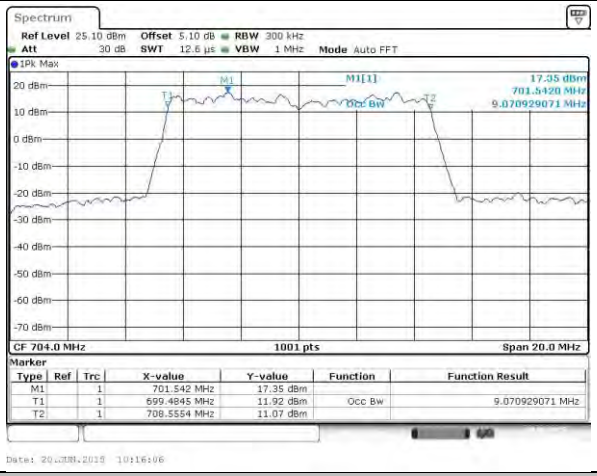


LTE Band 12

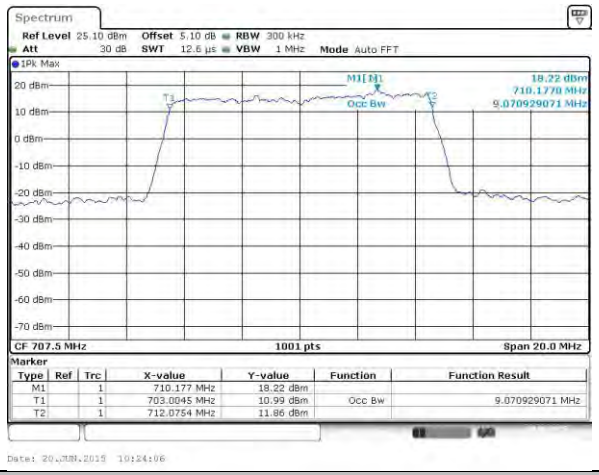
Lowest Channel / 10MHz / QPSK



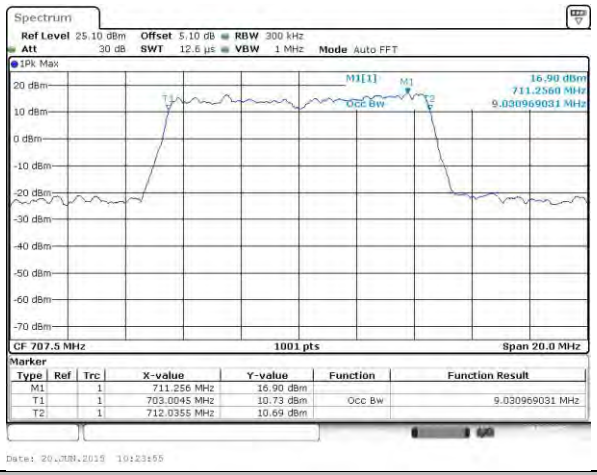
Lowest Channel / 10MHz / 16QAM



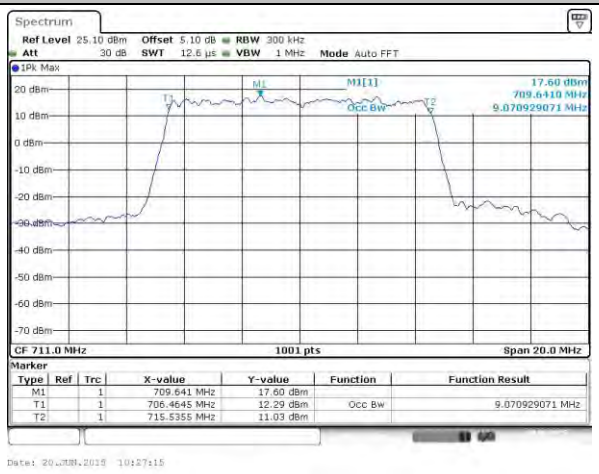
Middle Channel / 10MHz / QPSK



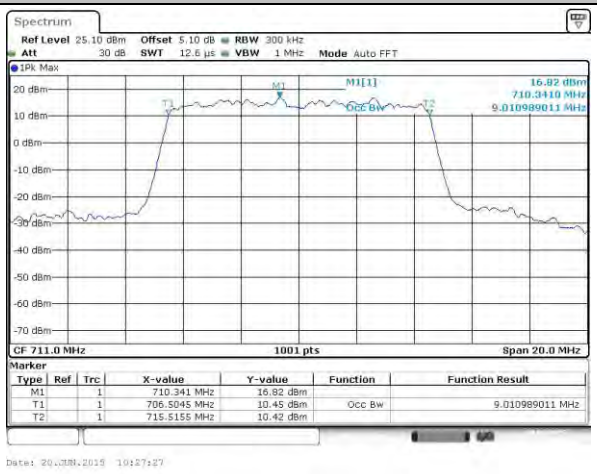
Middle Channel / 10MHz / 16QAM



Highest Channel / 10MHz / QPSK



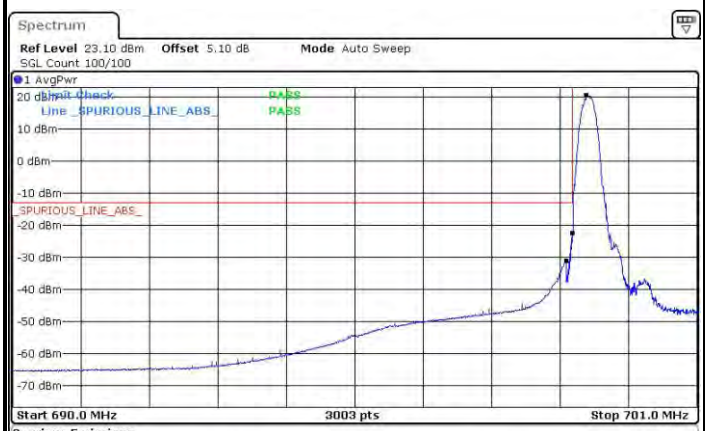
Highest Channel / 10MHz / 16QAM



Conducted Band Edge

LTE Band 12 / 1.4MHz / QPSK

Lowest Band Edge / 1 RB

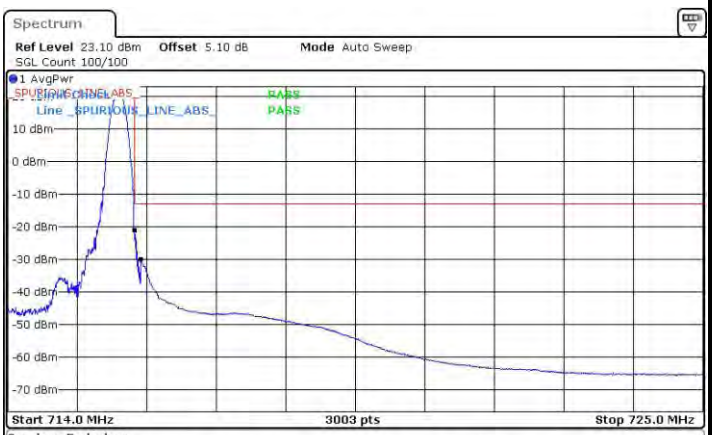


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-30.97 dBm	-17.97 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99965 MHz	-22.41 dBm	-9.41 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.22278 MHz	20.61 dBm	-9.39 dB

Date: 20.JUN.2015 11:17:04

Highest Band Edge / 1RB

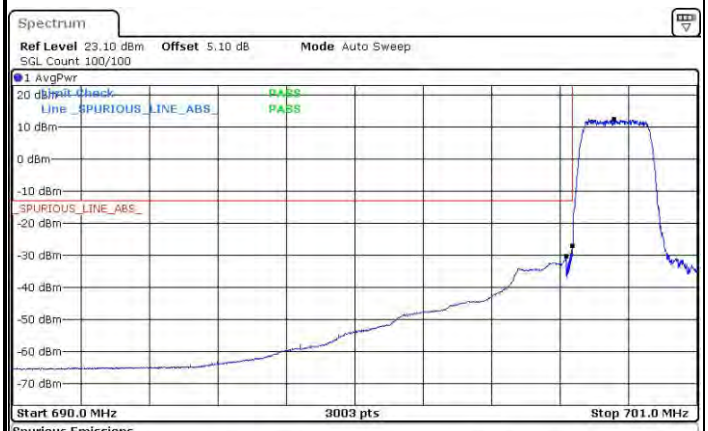


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.73726 MHz	20.94 dBm	-9.06 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00135 MHz	-20.97 dBm	-7.97 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-29.97 dBm	-16.97 dB

Date: 20.JUN.2015 11:28:25

Lowest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-30.17 dBm	-17.17 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99905 MHz	-26.99 dBm	-13.99 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.66234 MHz	12.66 dBm	-17.34 dB

Date: 20.JUN.2015 11:13:33

Highest Band Edge / Full RB

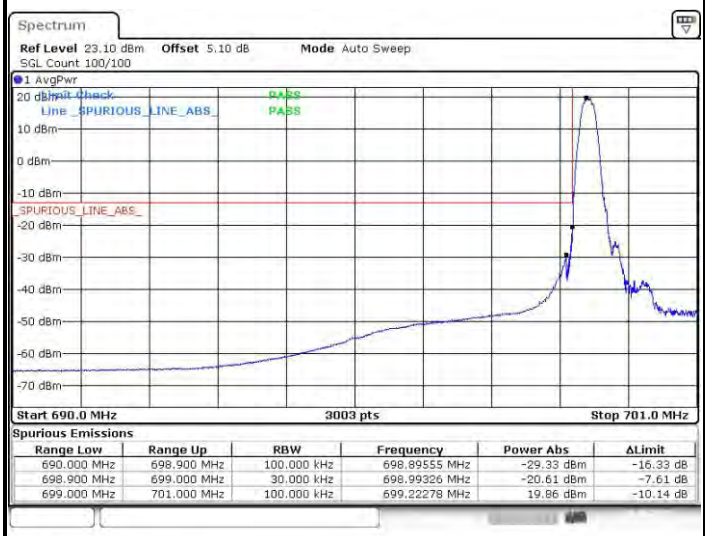
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.47952 MHz	12.53 dBm	-17.47 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00055 MHz	-26.85 dBm	-13.85 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-27.90 dBm	-14.90 dB

Date: 20.JUN.2015 11:24:55

LTE Band 12 / 1.4MHz / 16QAM

Lowest Band Edge / 1 RB

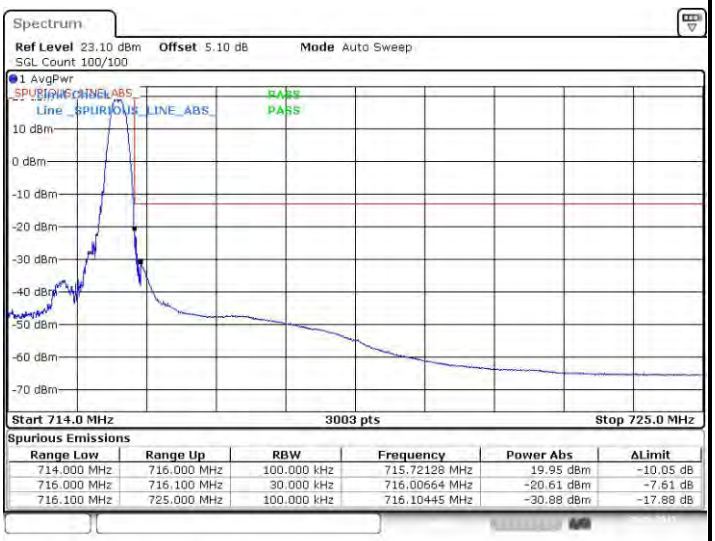


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-29.33 dBm	-16.33 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99326 MHz	-20.61 dBm	-7.61 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.22278 MHz	19.86 dBm	-10.14 dB

Date: 20.JUN.2015 11:15:54

Highest Band Edge / 1 RB

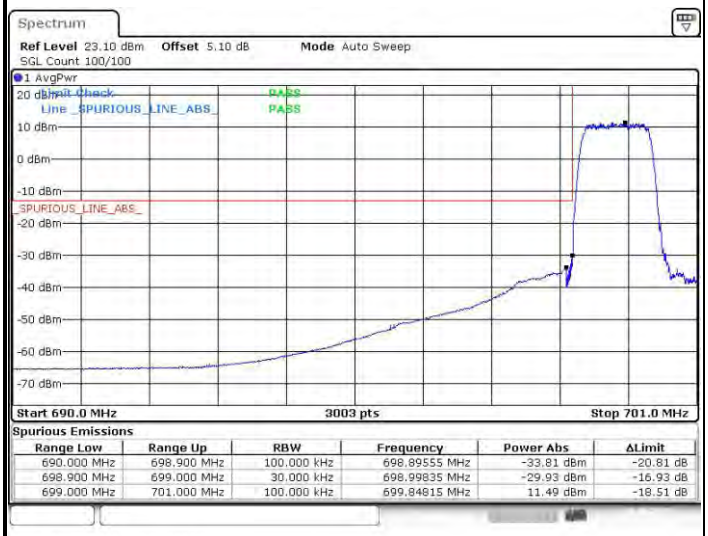


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.72128 MHz	19.95 dBm	-10.05 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00664 MHz	-20.61 dBm	-7.61 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-30.88 dBm	-17.88 dB

Date: 20.JUN.2015 11:27:15

Lowest Band Edge / Full RB

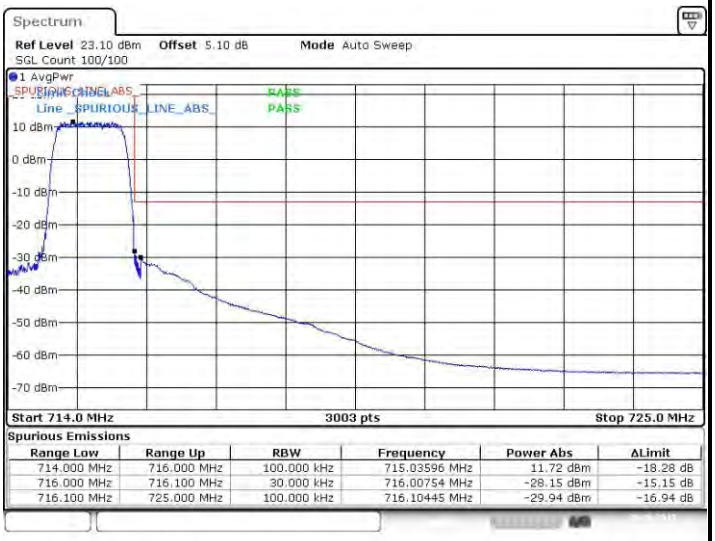


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-33.81 dBm	-20.81 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99835 MHz	-29.93 dBm	-16.93 dB
699.000 MHz	701.000 MHz	100.000 kHz	699.84815 MHz	11.49 dBm	-18.51 dB

Date: 20.JUN.2015 11:14:44

Highest Band Edge / Full RB



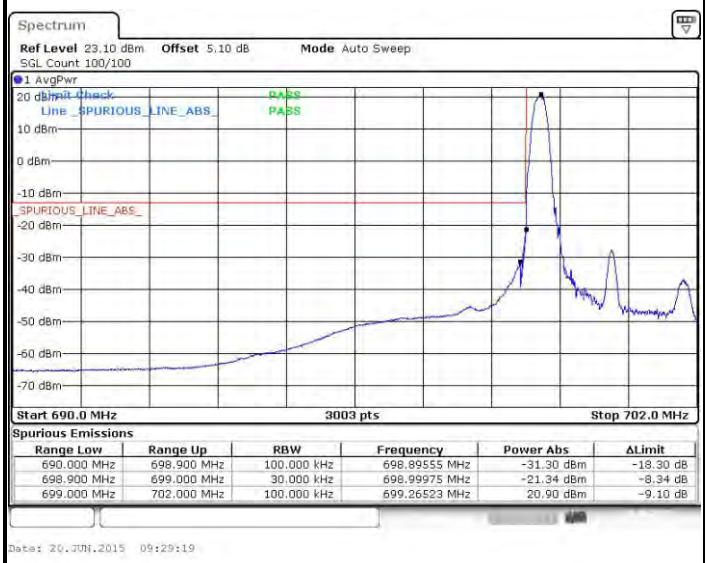
Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
714.000 MHz	716.000 MHz	100.000 kHz	715.03596 MHz	11.72 dBm	-18.28 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00754 MHz	-28.15 dBm	-15.15 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-29.94 dBm	-16.94 dB

Date: 20.JUN.2015 11:26:05

LTE Band 12 / 3MHz / QPSK

Lowest Band Edge / 1RB

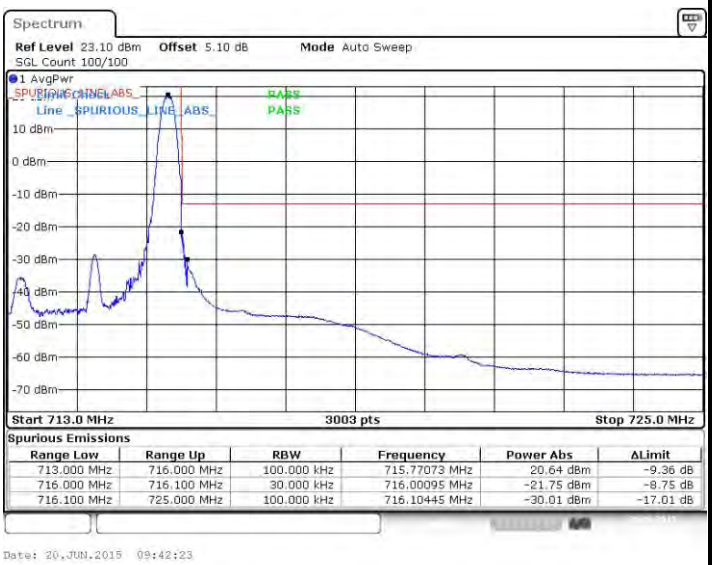


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.89555 MHz	-31.30 dBm	-18.30 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99975 MHz	-21.34 dBm	-8.34 dB
699.000 MHz	702.000 MHz	100.000 kHz	699.26523 MHz	20.90 dBm	-9.10 dB

Date: 20.JUN.2015 09:29:19

Highest Band Edge / 1 RB

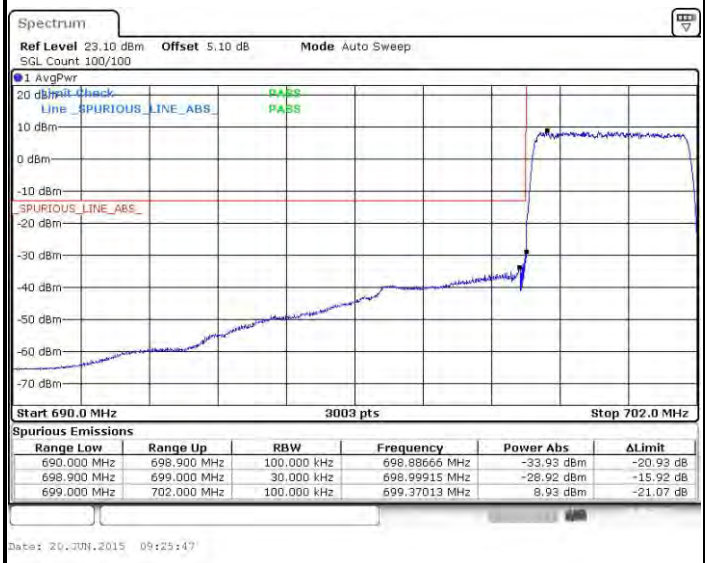


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
713.000 MHz	716.000 MHz	100.000 kHz	715.77073 MHz	20.64 dBm	-9.36 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00095 MHz	-21.75 dBm	-8.75 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-30.01 dBm	-17.01 dB

Date: 20.JUN.2015 09:42:23

Lowest Band Edge / Full RB

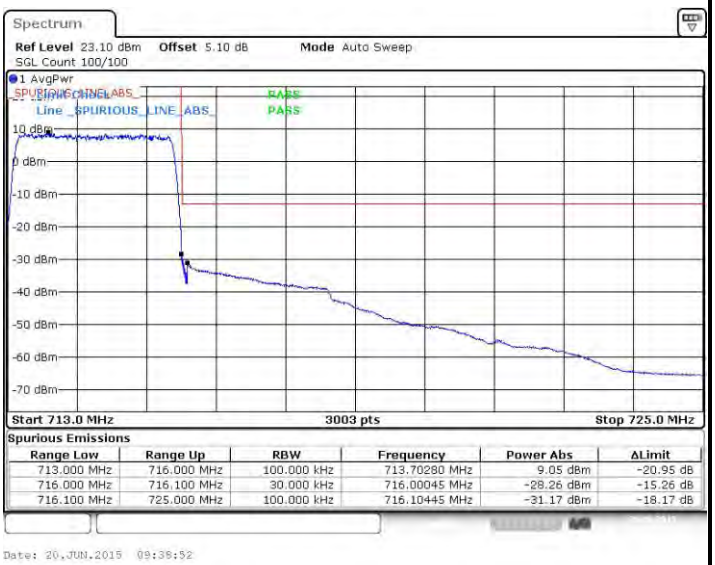


Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
690.000 MHz	698.900 MHz	100.000 kHz	698.88666 MHz	-33.93 dBm	-20.93 dB
698.900 MHz	699.000 MHz	30.000 kHz	698.99915 MHz	-28.92 dBm	-15.92 dB
699.000 MHz	702.000 MHz	100.000 kHz	699.37013 MHz	8.93 dBm	-21.07 dB

Date: 20.JUN.2015 09:25:47

Highest Band Edge / Full RB



Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
713.000 MHz	716.000 MHz	100.000 kHz	713.70280 MHz	9.05 dBm	-20.95 dB
716.000 MHz	716.100 MHz	30.000 kHz	716.00045 MHz	-28.26 dBm	-15.26 dB
716.100 MHz	725.000 MHz	100.000 kHz	716.10445 MHz	-31.17 dBm	-18.17 dB

Date: 20.JUN.2015 09:38:52