



LTE Band26				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				26805	26915	27025
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	<b>22.22</b>	22.07	22.04
3	QPSK	1	8	22.21	22.12	21.93
3	QPSK	1	14	22.21	22.02	21.98
3	QPSK	8	0	21.21	20.90	20.99
3	QPSK	8	4	21.23	21.01	21.10
3	QPSK	8	7	21.16	20.92	21.02
3	QPSK	15	0	21.26	21.00	21.04
3	16QAM	1	0	21.35	21.28	21.05
3	16QAM	1	8	21.43	21.27	21.18
3	16QAM	1	14	21.40	21.24	21.06
3	16QAM	8	0	20.42	20.04	20.08
3	16QAM	8	4	20.29	19.97	20.07
3	16QAM	8	7	20.40	19.93	20.12
3	16QAM	15	0	20.39	19.92	20.13
3	64QAM	1	0	21.65	21.09	21.12
3	64QAM	1	8	21.26	21.09	21.28
3	64QAM	1	14	21.43	20.99	21.22
3	64QAM	8	0	20.35	20.05	20.03
3	64QAM	8	4	20.26	19.98	20.16
3	64QAM	8	7	20.31	19.90	19.99
3	64QAM	15	0	20.19	19.99	20.17



LTE Band26				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				26797	26915	27033
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	22.04	21.87	21.86
1.4	QPSK	1	3	22.18	21.90	22.06
1.4	QPSK	1	5	22.14	21.82	22.01
1.4	QPSK	3	0	22.19	21.94	22.02
1.4	QPSK	3	1	<b>22.23</b>	22.02	22.02
1.4	QPSK	3	3	22.17	21.95	22.01
1.4	QPSK	6	0	21.15	20.90	20.97
1.4	16QAM	1	0	21.53	21.27	20.87
1.4	16QAM	1	3	21.58	21.38	20.90
1.4	16QAM	1	5	21.56	20.95	20.86
1.4	16QAM	3	0	21.14	20.99	21.03
1.4	16QAM	3	1	21.21	20.97	21.06
1.4	16QAM	3	3	21.18	20.99	20.84
1.4	16QAM	6	0	20.32	20.14	20.04
1.4	64QAM	1	0	21.05	20.95	21.13
1.4	64QAM	1	3	21.22	21.35	21.41
1.4	64QAM	1	5	21.29	21.26	21.21
1.4	64QAM	3	0	21.23	21.00	21.13
1.4	64QAM	3	1	21.37	21.08	21.05
1.4	64QAM	3	3	21.33	21.01	21.00
1.4	64QAM	6	0	20.28	20.01	20.13



LTE Band 30				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				/	27710	/
Frequency (MHz)				/	2310	/
10	QPSK	1	0	/	<b>23.95</b>	/
10	QPSK	1	25	/	23.75	/
10	QPSK	1	49	/	23.90	/
10	QPSK	25	0	/	23.00	/
10	QPSK	25	12	/	22.95	/
10	QPSK	25	25	/	22.93	/
10	QPSK	50	0	/	22.93	/
10	16QAM	1	0	/	23.58	/
10	16QAM	1	25	/	23.37	/
10	16QAM	1	49	/	22.95	/
10	16QAM	25	0	/	22.11	/
10	16QAM	25	12	/	21.98	/
10	16QAM	25	25	/	21.91	/
10	16QAM	50	0	/	21.99	/
10	64QAM	1	0	/	23.27	/
10	64QAM	1	25	/	22.98	/
10	64QAM	1	49	/	22.95	/
10	64QAM	25	0	/	21.88	/
10	64QAM	25	12	/	21.94	/
10	64QAM	25	25	/	21.88	/
10	64QAM	50	0	/	21.98	/



LTE Band 30				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				27685	27710	27735
Frequency (MHz)				2307.5	2310	2312.5
5	QPSK	1	0	23.90	<b>23.95</b>	23.82
5	QPSK	1	12	23.87	23.85	23.86
5	QPSK	1	24	23.88	23.85	23.70
5	QPSK	12	0	23.00	22.82	22.93
5	QPSK	12	7	22.83	22.87	22.89
5	QPSK	12	13	22.88	22.82	22.83
5	QPSK	25	0	22.89	22.92	22.87
5	16QAM	1	0	23.54	23.27	23.16
5	16QAM	1	12	22.98	22.96	22.97
5	16QAM	1	24	23.27	23.01	23.03
5	16QAM	12	0	22.06	21.99	21.92
5	16QAM	12	7	21.90	21.99	21.87
5	16QAM	12	13	21.92	21.83	21.82
5	16QAM	25	0	21.94	21.82	21.97
5	64QAM	1	0	23.19	23.45	22.83
5	64QAM	1	12	22.79	22.98	23.34
5	64QAM	1	24	22.82	22.88	23.30
5	64QAM	12	0	22.00	21.93	21.78
5	64QAM	12	7	22.00	22.02	21.90
5	64QAM	12	13	22.07	21.90	21.98
5	64QAM	25	0	21.96	22.00	21.98



LTE Band 38				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				37850	38000	38150
Frequency (MHz)				2580	2595	2610
20	QPSK	1	0	<b>23.84</b>	23.72	23.61
20	QPSK	1	49	23.62	23.48	23.24
20	QPSK	1	99	23.47	23.34	23.08
20	QPSK	50	0	22.83	22.81	22.73
20	QPSK	50	24	22.71	22.62	22.52
20	QPSK	50	50	22.68	22.65	22.42
20	QPSK	100	0	22.66	22.69	22.59
20	16QAM	1	0	23.19	23.10	23.00
20	16QAM	1	49	22.88	22.88	22.66
20	16QAM	1	99	22.73	22.73	22.58
20	16QAM	50	0	22.62	22.74	22.67
20	16QAM	50	24	22.91	22.76	22.68
20	16QAM	50	50	22.79	22.81	22.64
20	16QAM	100	0	22.81	22.78	22.59
20	64QAM	1	0	23.12	23.05	22.96
20	64QAM	1	49	22.74	22.70	22.57
20	64QAM	1	99	22.66	22.65	22.40
20	64QAM	50	0	22.51	22.73	22.73
20	64QAM	50	24	22.62	22.64	22.65
20	64QAM	50	50	22.68	22.63	22.44
20	64QAM	100	0	22.77	22.65	22.56



LTE Band 38				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				37825	38000	38175
Frequency (MHz)				2577.5	2595	2612.5
15	QPSK	1	0	<b>23.83</b>	23.73	23.61
15	QPSK	1	37	23.59	23.51	23.28
15	QPSK	1	74	23.54	23.55	23.31
15	QPSK	36	0	22.82	22.59	22.47
15	QPSK	36	20	22.78	22.61	22.39
15	QPSK	36	39	22.68	22.45	22.24
15	QPSK	75	0	22.75	22.59	22.46
15	16QAM	1	0	23.12	22.96	22.94
15	16QAM	1	37	22.91	22.84	22.63
15	16QAM	1	74	22.86	22.79	22.45
15	16QAM	36	0	23.06	22.82	22.59
15	16QAM	36	20	23.73	22.81	22.39
15	16QAM	36	39	23.55	23.66	22.35
15	16QAM	75	0	23.70	22.84	22.51
15	64QAM	1	0	22.99	22.90	22.85
15	64QAM	1	37	22.81	22.74	22.52
15	64QAM	1	74	22.83	22.82	21.84
15	64QAM	36	0	22.88	22.83	22.42
15	64QAM	36	20	22.79	22.70	22.48
15	64QAM	36	39	22.86	22.83	22.72
15	64QAM	75	0	22.89	22.81	22.83



LTE Band 38				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				37800	38000	38200
Frequency (MHz)				2575	2595	2615
10	QPSK	1	0	<b>23.66</b>	23.55	23.29
10	QPSK	1	25	23.52	23.39	23.22
10	QPSK	1	49	23.45	23.42	23.06
10	QPSK	25	0	22.69	22.51	22.41
10	QPSK	25	12	22.62	22.63	22.33
10	QPSK	25	25	22.65	22.63	22.3
10	QPSK	50	0	22.52	22.65	22.33
10	16QAM	1	0	22.90	23.03	22.69
10	16QAM	1	25	22.88	22.79	22.53
10	16QAM	1	49	22.80	22.71	22.57
10	16QAM	25	0	22.76	22.78	22.38
10	16QAM	25	12	22.88	22.68	22.51
10	16QAM	25	25	22.59	22.8	22.48
10	16QAM	50	0	22.80	22.78	22.48
10	64QAM	1	0	22.79	22.90	22.52
10	64QAM	1	25	22.70	22.70	22.43
10	64QAM	1	49	22.59	22.61	22.36
10	64QAM	25	0	22.74	22.64	22.34
10	64QAM	25	12	22.62	22.76	22.47
10	64QAM	25	25	22.66	22.55	22.22
10	64QAM	50	0	22.75	22.73	22.45



LTE Band 38				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				37775	38000	38225
Frequency (MHz)				2572.5	2595	2617.5
5	QPSK	1	0	<b>23.73</b>	23.43	23.15
5	QPSK	1	12	23.50	23.43	23.19
5	QPSK	1	24	23.39	23.32	23.03
5	QPSK	12	0	23.64	22.52	22.32
5	QPSK	12	7	23.72	22.59	22.25
5	QPSK	12	13	22.67	22.54	22.38
5	QPSK	25	0	23.52	22.62	22.28
5	16QAM	1	0	22.93	22.88	22.50
5	16QAM	1	12	22.75	22.84	22.59
5	16QAM	1	24	22.86	22.73	22.55
5	16QAM	12	0	23.48	22.77	22.37
5	16QAM	12	7	23.58	22.64	22.39
5	16QAM	12	13	22.81	22.68	22.32
5	16QAM	25	0	22.80	22.68	22.36
5	64QAM	1	0	22.74	22.81	22.53
5	64QAM	1	12	22.66	22.73	22.37
5	64QAM	1	24	22.67	22.73	22.45
5	64QAM	12	0	22.61	22.62	22.42
5	64QAM	12	7	22.62	22.59	22.46
5	64QAM	12	13	22.55	22.63	22.37
5	64QAM	25	0	22.51	22.72	22.39





LTE Band 40 Block A				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				/	38750	/
Frequency (MHz)				/	2310	/
10	QPSK	1	0	/	<b>24.24</b>	/
10	QPSK	1	25	/	24.11	/
10	QPSK	1	49	/	23.95	/
10	QPSK	25	0	/	23.30	/
10	QPSK	25	12	/	23.11	/
10	QPSK	25	25	/	23.23	/
10	QPSK	50	0	/	23.23	/
10	16QAM	1	0	/	23.51	/
10	16QAM	1	25	/	23.49	/
10	16QAM	1	49	/	23.31	/
10	16QAM	25	0	/	22.30	/
10	16QAM	25	12	/	22.36	/
10	16QAM	25	25	/	22.19	/
10	16QAM	50	0	/	22.36	/
10	64QAM	1	0	/	23.42	/
10	64QAM	1	25	/	23.37	/
10	64QAM	1	49	/	23.18	/
10	64QAM	25	0	/	22.23	/
10	64QAM	25	12	/	22.29	/
10	64QAM	25	25	/	22.12	/
10	64QAM	50	0	/	22.29	/



LTE Band 40 Block A				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				38725	38750	38775
Frequency (MHz)				2307.5	2310	2312.5
5	QPSK	1	0	<b>24.11</b>	24.10	24.09
5	QPSK	1	12	24.16	24.11	24.08
5	QPSK	1	24	24.10	23.95	24.03
5	QPSK	12	0	23.13	23.24	23.33
5	QPSK	12	7	23.30	23.36	23.13
5	QPSK	12	13	23.13	23.10	23.32
5	QPSK	25	0	23.28	23.25	23.31
5	16QAM	1	0	23.45	23.36	23.55
5	16QAM	1	12	23.44	23.41	23.48
5	16QAM	1	24	23.38	23.45	23.43
5	16QAM	12	0	22.47	22.49	22.26
5	16QAM	12	7	22.42	22.40	22.36
5	16QAM	12	13	22.26	22.23	22.26
5	16QAM	25	0	22.47	22.43	22.39
5	64QAM	1	0	23.47	23.27	23.35
5	64QAM	1	12	23.43	23.29	23.26
5	64QAM	1	24	23.27	23.35	23.33
5	64QAM	12	0	22.42	22.23	22.42
5	64QAM	12	7	22.28	22.26	22.22
5	64QAM	12	13	22.30	22.28	22.31
5	64QAM	25	0	22.17	22.36	22.41



LTE Band 40 Block B				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				/	39200	/
Frequency (MHz)				/	2355	/
10	QPSK	1	0	/	<b>24.29</b>	/
10	QPSK	1	25	/	24.10	/
10	QPSK	1	49	/	24.13	/
10	QPSK	25	0	/	23.22	/
10	QPSK	25	12	/	23.41	/
10	QPSK	25	25	/	23.34	/
10	QPSK	50	0	/	23.41	/
10	16QAM	1	0	/	23.74	/
10	16QAM	1	25	/	23.57	/
10	16QAM	1	49	/	23.41	/
10	16QAM	25	0	/	22.59	/
10	16QAM	25	12	/	22.36	/
10	16QAM	25	25	/	22.39	/
10	16QAM	50	0	/	22.55	/
10	64QAM	1	0	/	23.58	/
10	64QAM	1	25	/	23.36	/
10	64QAM	1	49	/	23.37	/
10	64QAM	25	0	/	22.51	/
10	64QAM	25	12	/	22.29	/
10	64QAM	25	25	/	22.44	/
10	64QAM	50	0	/	22.26	/



LTE Band 40 Block B				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				39175	39200	39225
Frequency (MHz)				2352.5	2355	2357.5
5	QPSK	1	0	24.21	<b>24.27</b>	24.19
5	QPSK	1	12	24.21	24.26	24.23
5	QPSK	1	24	24.18	24.08	24.11
5	QPSK	12	0	23.21	23.30	23.39
5	QPSK	12	7	23.30	23.37	23.44
5	QPSK	12	13	23.30	23.17	23.17
5	QPSK	25	0	23.39	23.37	23.36
5	16QAM	1	0	23.61	23.65	23.5
5	16QAM	1	12	23.47	23.45	23.58
5	16QAM	1	24	23.55	23.38	23.52
5	16QAM	12	0	22.55	22.55	22.53
5	16QAM	12	7	22.53	22.51	22.39
5	16QAM	12	13	22.46	22.31	22.5
5	16QAM	25	0	22.46	22.55	22.56
5	64QAM	1	0	23.57	23.45	23.51
5	64QAM	1	12	23.46	23.43	23.46
5	64QAM	1	24	23.35	23.27	23.42
5	64QAM	12	0	22.28	22.28	22.48
5	64QAM	12	7	22.48	22.46	22.44
5	64QAM	12	13	22.37	22.46	22.24
5	64QAM	25	0	22.48	22.47	22.48



LTE Band 41				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				39750	40620	41490
Frequency (MHz)				2506.0	2593.0	2680.0
20	QPSK	1	0	23.93	<b>24.06</b>	23.84
20	QPSK	1	49	23.77	23.75	23.66
20	QPSK	1	99	23.77	23.69	23.57
20	QPSK	50	0	23.02	23.06	22.94
20	QPSK	50	24	22.94	22.82	22.93
20	QPSK	50	50	22.88	22.75	22.91
20	QPSK	100	0	23.13	22.85	23.07
20	16QAM	1	0	22.52	23.34	23.24
20	16QAM	1	49	22.76	23.18	23.13
20	16QAM	1	99	22.80	22.89	22.84
20	16QAM	50	0	22.16	22.08	22.13
20	16QAM	50	24	22.01	22.07	22.06
20	16QAM	50	50	21.84	22.02	21.90
20	16QAM	100	0	22.08	22.10	21.87
20	64QAM	1	0	23.24	23.26	23.23
20	64QAM	1	49	22.95	22.96	23.07
20	64QAM	1	99	22.88	22.87	22.76
20	64QAM	50	0	21.88	22.02	22.02
20	64QAM	50	24	22.01	21.91	22.00
20	64QAM	50	50	21.90	21.95	21.91
20	64QAM	100	0	22.21	22.15	21.97



LTE Band 41				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				39725	40620	41515
Frequency (MHz)				2503.5	2593.0	2682.5
15	QPSK	1	0	23.97	<b>24.04</b>	23.94
15	QPSK	1	37	23.63	23.74	23.76
15	QPSK	1	74	23.67	23.81	23.76
15	QPSK	36	0	23.04	22.90	23.33
15	QPSK	36	20	22.82	22.96	22.84
15	QPSK	36	39	22.79	22.76	22.91
15	QPSK	75	0	23.09	22.84	22.97
15	16QAM	1	0	22.58	23.30	23.08
15	16QAM	1	37	22.7	23.11	23.01
15	16QAM	1	74	22.83	23.07	22.97
15	16QAM	36	0	21.78	22.09	22.07
15	16QAM	36	20	22.00	22.06	22.07
15	16QAM	36	39	21.99	21.86	21.97
15	16QAM	75	0	21.81	21.99	22.17
15	64QAM	1	0	22.63	23.20	23.13
15	64QAM	1	37	22.89	22.88	22.98
15	64QAM	1	74	21.85	22.03	22.07
15	64QAM	36	0	21.88	22.09	22.09
15	64QAM	36	20	21.82	21.88	21.87
15	64QAM	36	39	21.98	22.08	21.98
15	64QAM	75	0	21.83	22.06	21.97



LTE Band 41				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				39700	40620	41540
Frequency (MHz)				2501.0	2593.0	2685.0
10	QPSK	1	0	23.90	23.84	23.84
10	QPSK	1	25	<b>23.98</b>	23.69	23.76
10	QPSK	1	49	23.72	23.69	23.07
10	QPSK	25	0	23.12	22.89	23.23
10	QPSK	25	12	23.16	22.84	23.00
10	QPSK	25	25	22.87	22.81	22.81
10	QPSK	50	0	23.13	22.88	22.97
10	16QAM	1	0	22.50	23.27	23.14
10	16QAM	1	25	22.77	23.12	23.1
10	16QAM	1	49	22.64	23.11	22.91
10	16QAM	25	0	21.99	21.97	21.94
10	16QAM	25	12	22.02	22.03	22.00
10	16QAM	25	25	21.90	21.89	21.92
10	16QAM	50	0	22.17	21.92	22.02
10	64QAM	1	0	22.64	23.05	23.12
10	64QAM	1	25	22.90	23.08	22.93
10	64QAM	1	49	22.79	22.99	22.93
10	64QAM	25	0	22.01	21.97	22.03
10	64QAM	25	12	21.86	22.02	21.87
10	64QAM	25	25	21.91	21.87	21.96
10	64QAM	50	0	22.01	22.02	21.84



LTE Band 41				Measured EIRP		
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.	High Ch. / Freq.
Channel				39675	40620	41565
Frequency (MHz)				2498.5	2593.0	2687.5
5	QPSK	1	0	23.74	23.79	<b>23.83</b>
5	QPSK	1	12	17.34	23.74	23.77
5	QPSK	1	24	23.86	23.67	23.68
5	QPSK	12	0	23.16	22.96	22.83
5	QPSK	12	7	23.32	23.00	22.97
5	QPSK	12	13	23.09	22.92	22.91
5	QPSK	25	0	22.91	22.82	22.84
5	16QAM	1	0	22.46	23.07	23.10
5	16QAM	1	12	22.81	23.16	22.99
5	16QAM	1	24	22.63	22.99	23.07
5	16QAM	12	0	21.77	21.91	22.02
5	16QAM	12	7	21.92	22.05	21.99
5	16QAM	12	13	21.89	21.96	21.87
5	16QAM	25	0	21.99	21.91	22.03
5	64QAM	1	0	22.99	23.00	23.07
5	64QAM	1	12	22.93	22.95	23.01
5	64QAM	1	24	22.81	22.99	22.97
5	64QAM	12	0	21.96	22.00	21.97
5	64QAM	12	7	21.99	22.02	21.98
5	64QAM	12	13	21.83	21.88	22.01
5	64QAM	25	0	21.75	22.04	21.90

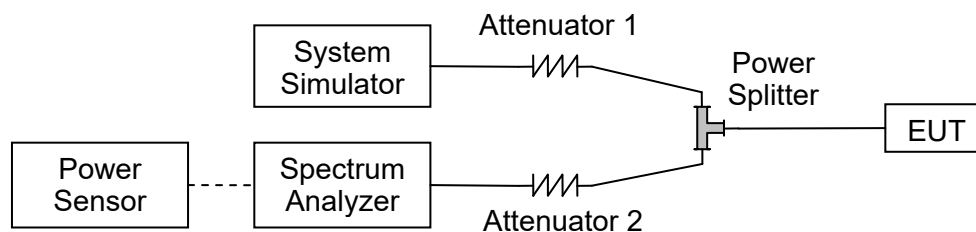


## 2.2. Occupied Bandwidth

### 2.2.1. Requirement

According to FCC section 2.1049, the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission. Occupied bandwidth is also known as the 99% emission bandwidth.

### 2.2.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

### 2.2.3. Test procedure

KDB 971168 D01v03 Section 4.1 and ANSI/TIA-603-E-2016.

**2.2.4. Test Result**

LTE Band 2							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
1.4	QPSK	1.09	1.24	1.09	1.23	1.09	1.25
	16QAM	1.09	1.23	1.09	1.24	1.10	1.25
	64QAM	1.10	1.25	1.09	1.25	1.09	1.23
3	QPSK	2.71	3.00	2.69	3.00	2.69	3.01
	16QAM	2.70	3.00	2.70	2.99	2.70	3.01
	64QAM	2.71	3.17	2.71	2.99	2.70	3.02
5	QPSK	4.50	5.00	4.50	5.02	4.50	5.01
	16QAM	4.49	5.00	4.49	4.97	4.50	4.98
	64QAM	4.51	5.05	4.50	5.02	4.50	4.99
10	QPSK	8.98	9.87	8.97	9.83	8.98	9.86
	16QAM	8.95	9.82	8.96	9.73	8.96	9.81
	64QAM	8.99	9.89	9.01	9.87	8.99	9.79
15	QPSK	13.46	14.70	13.44	14.67	13.46	14.67
	16QAM	13.46	14.73	13.45	14.61	13.45	14.77
	64QAM	13.47	14.69	13.46	14.42	13.39	14.63
20	QPSK	17.96	19.43	17.92	19.48	17.91	19.54
	16QAM	17.94	19.02	17.94	19.45	17.95	19.56
	64QAM	17.99	19.59	17.89	19.51	17.92	19.55

LTE Band 4							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
1.4	QPSK	1.09	1.24	1.10	1.24	1.09	1.24
	16QAM	1.09	1.23	1.10	1.24	1.10	1.24
	64QAM	1.09	1.24	1.09	1.23	1.09	1.23
3	QPSK	2.69	3.00	2.7	3.00	2.70	3.00
	16QAM	2.70	3.00	2.7	3.00	2.70	3.01
	64QAM	2.70	3.01	2.68	2.96	2.7	3.00
5	QPSK	4.50	5.00	4.50	4.98	4.50	4.98
	16QAM	4.49	4.97	4.49	4.95	4.50	4.95
	64QAM	4.50	4.96	4.50	5.00	4.50	5.00
10	QPSK	8.98	9.76	8.99	9.74	8.99	9.81
	16QAM	8.97	9.73	8.96	9.77	8.95	9.72
	64QAM	8.98	9.84	8.98	9.75	8.99	9.79
15	QPSK	13.46	14.67	13.49	14.59	13.48	14.58
	16QAM	13.46	14.61	13.46	14.64	13.45	14.77
	64QAM	13.43	14.68	13.48	14.61	13.48	14.61
20	QPSK	17.94	19.51	17.91	19.42	17.90	19.38
	16QAM	17.96	19.43	17.95	19.38	17.98	19.51
	64QAM	17.90	19.34	17.94	19.45	17.94	19.47

LTE Band 5							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
1.4	QPSK	1.09	1.23	1.09	1.24	1.09	1.24
	16QAM	1.09	1.24	1.1	1.24	1.1	1.24
	64QAM	1.09	1.24	1.09	1.25	1.09	1.24
3	QPSK	2.70	2.97	2.70	2.99	2.71	3.01
	16QAM	2.70	3.01	2.70	3.0	2.71	3.01
	64QAM	2.70	2.99	2.70	3.01	2.70	3.01
5	QPSK	4.50	4.99	4.50	4.95	4.50	4.96
	16QAM	4.50	4.95	4.50	4.99	4.50	4.98
	64QAM	4.51	4.99	4.50	4.96	4.50	4.99
10	QPSK	9.00	9.88	8.98	9.82	9.01	9.73
	16QAM	8.98	9.76	8.94	9.73	8.94	9.75
	64QAM	9.01	9.87	8.99	9.87	9.02	9.85

LTE Band 7							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
5	QPSK	4.51	4.97	4.50	5.00	4.50	4.98
	16QAM	4.5	4.94	4.51	4.99	4.51	4.96
	64QAM	4.51	4.99	4.50	4.94	4.51	4.92
10	QPSK	8.99	9.78	9.01	9.85	8.97	9.76
	16QAM	8.97	9.75	8.95	9.80	8.96	9.71
	64QAM	8.96	9.76	8.97	9.77	8.95	9.72
15	QPSK	13.46	14.65	13.44	14.57	13.44	14.67
	16QAM	13.41	14.6	13.46	14.71	13.44	14.72
	64QAM	13.44	14.69	13.47	14.63	13.44	14.63
20	QPSK	17.94	19.51	17.93	19.43	17.91	19.50
	16QAM	17.91	19.52	17.93	19.46	17.90	19.50
	64QAM	17.96	19.42	17.94	19.47	17.92	19.43



LTE Band 12							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
1.4	QPSK	1.1	1.24	1.09	1.25	1.09	1.24
	16QAM	1.1	1.25	1.1	1.24	1.1	1.24
	64QAM	1.09	1.25	1.1	1.24	1.1	1.24
3	QPSK	2.7	3.01	2.69	3.01	2.71	3.02
	16QAM	2.7	2.99	2.7	3.0	2.71	3.02
	64QAM	2.7	2.97	2.7	3.0	2.71	3.02
5	QPSK	4.52	4.98	4.48	4.94	4.52	4.96
	16QAM	4.51	4.95	4.5	4.94	4.52	4.97
	64QAM	4.51	4.91	4.49	4.9	4.51	4.99
10	QPSK	9.06	9.91	8.94	9.67	8.94	9.68
	16QAM	9.03	9.82	8.89	9.6	8.91	9.68
	64QAM	9.02	9.81	8.87	9.61	8.89	9.67

LTE Band 17							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
5	QPSK	4.49	4.98	4.47	4.94	4.53	4.98
	16QAM	4.5	4.97	4.48	4.92	4.52	4.96
	64QAM	4.51	4.94	4.47	4.93	4.52	4.96
10	QPSK	8.91	9.59	8.9	9.66	8.96	9.69
	16QAM	8.85	9.67	8.85	9.7	8.9	9.6
	64QAM	8.86	9.57	8.86	9.66	8.91	9.65



LTE Band 19							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
5	QPSK	4.5	4.98	4.49	4.97	4.50	4.97
	16QAM	4.51	5.00	4.50	4.97	4.50	4.96
	64QAM	4.51	5.00	4.50	4.96	4.50	4.95
10	QPSK	9.00	9.83	8.98	9.79	8.95	9.80
	16QAM	8.96	9.71	8.94	9.68	8.95	9.80
	64QAM	8.95	9.76	8.95	9.71	8.94	9.72
15	QPSK	/	/	13.40	14.58	/	/
	16QAM	/	/	13.43	14.55	/	/
	64QAM	/	/	13.41	14.60	/	/

LTE Band 25							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
1.4	QPSK	1.10	1.25	1.09	1.24	1.09	1.24
	16QAM	1.10	1.24	1.10	1.25	1.10	1.23
	64QAM	1.10	1.25	1.09	1.24	1.09	1.23
3	QPSK	2.71	3.04	2.70	3.04	2.70	2.99
	16QAM	2.70	3.02	2.70	3.00	2.70	3.00
	64QAM	2.70	3.00	2.70	3.00	2.70	2.99
5	QPSK	4.50	4.98	4.50	4.96	4.50	4.96
	16QAM	4.51	4.99	4.50	4.98	4.50	4.98
	64QAM	4.49	4.96	4.50	4.94	4.50	4.97
10	QPSK	9.00	9.93	9.00	9.77	9.02	9.81
	16QAM	8.96	9.84	8.96	9.78	8.97	9.70
	64QAM	8.94	9.72	8.96	9.71	8.93	9.73
15	QPSK	13.49	14.78	13.45	14.67	13.44	14.62
	16QAM	13.47	14.72	13.44	14.61	13.42	14.58
	64QAM	5.83	13.98	13.46	14.62	13.42	14.71
20	QPSK	17.98	19.36	17.93	19.54	17.83	19.38
	16QAM	18.02	19.73	17.89	19.44	17.86	19.41
	64QAM	17.85	19.16	17.89	19.49	17.92	19.42



LTE Band 26							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
1.4	QPSK	1.10	1.25	1.09	1.24	1.10	1.24
	16QAM	1.09	1.23	1.10	1.25	1.09	1.24
	64QAM	1.10	1.23	1.10	1.25	1.09	1.24
3	QPSK	2.71	3.03	2.71	3.05	2.71	3.02
	16QAM	2.71	3.02	2.72	3.05	2.70	3.00
	64QAM	2.71	3.04	2.71	3.05	2.70	3.00
5	QPSK	4.51	4.93	4.51	4.99	4.51	4.96
	16QAM	4.51	4.96	4.50	4.95	4.51	4.94
	64QAM	4.51	4.97	4.51	4.98	4.52	4.96
10	QPSK	9.00	9.86	8.96	9.83	8.97	9.67
	16QAM	8.98	9.81	8.94	9.66	8.98	9.83
	64QAM	8.98	9.77	8.97	9.78	8.98	9.87
15	QPSK	13.47	14.55	13.41	14.64	13.42	14.59
	16QAM	13.49	14.76	13.42	14.40	13.42	14.63
	64QAM	13.45	14.66	13.4	14.55	13.42	14.48

LTE Band 30							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
5	QPSK	4.50	5.00	4.51	4.99	4.49	4.97
	16QAM	4.51	4.94	4.50	4.99	4.50	4.92
	64QAM	4.50	4.97	4.50	4.96	4.50	4.95
10	QPSK	/	/	8.99	9.81	/	/
	16QAM	/	/	8.95	9.73	/	/
	64QAM	/	/	8.96	9.75	/	/



LTE Band 38							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
5	QPSK	4.51	4.97	4.51	4.97	4.51	4.97
	16QAM	4.52	5.34	4.51	5.50	4.51	5.47
	64QAM	4.51	4.98	4.50	4.99	4.50	4.99
10	QPSK	8.97	10.19	8.96	9.85	8.98	9.84
	16QAM	8.96	9.89	8.97	10.03	8.97	9.94
	64QAM	8.98	9.96	8.97	9.83	8.97	9.81
15	QPSK	13.44	15.09	13.47	15.02	13.46	14.84
	16QAM	13.47	14.82	13.47	14.82	13.47	14.85
	64QAM	13.44	14.9	13.46	14.55	13.48	14.82
20	QPSK	17.93	20.0	17.9	19.35	17.93	19.7
	16QAM	17.91	19.68	17.9	19.35	17.94	19.48
	64QAM	17.96	20.07	17.91	20.11	17.9	19.86

LTE Band 40 Block A							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
5	QPSK	4.50	5.05	4.48	5.06	4.49	5.00
	16QAM	4.50	5.16	4.49	5.05	4.48	5.04
	64QAM	4.48	5.12	4.49	5.13	4.48	5.13
10	QPSK	/	/	8.97	9.58	/	/
	16QAM	/	/	8.94	9.78	/	/
	64QAM	/	/	8.97	10.01	/	/

LTE Band 40 Block B							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
5	QPSK	4.49	4.95	4.48	4.84	4.48	4.91
	16QAM	4.48	4.90	4.47	4.94	4.49	4.99
	64QAM	4.48	4.99	4.49	4.92	4.48	4.95
10	QPSK	/	/	8.98	9.78	/	/
	16QAM	/	/	8.98	9.96	/	/
	64QAM	/	/	8.97	9.78	/	/



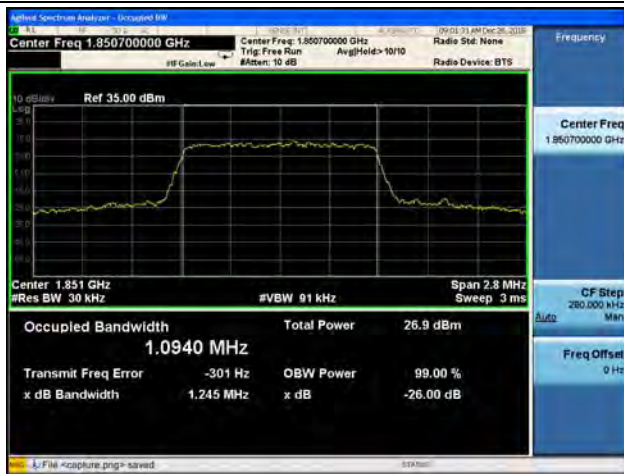


LTE Band 41							
BW (MHz)	Modulation	LCH		MCH		HCH	
		OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)	OBW (MHz)	26dB BW (MHz)
5	QPSK	4.49	4.98	4.5	4.97	5.12	9.96
	16QAM	4.50	4.87	4.51	5.35	5.34	9.88
	64QAM	4.50	4.92	4.50	4.94	5.29	9.79
10	QPSK	9.02	15.46	8.97	9.80	9.01	12.74
	16QAM	9.01	14.75	8.97	10.07	9.03	16.57
	64QAM	9.03	13.65	8.96	9.91	8.99	12.34
15	QPSK	13.5	18.04	13.47	14.59	13.49	15.01
	16QAM	13.49	17.90	13.45	14.78	13.48	15.11
	64QAM	13.48	19.82	13.44	14.97	13.47	14.55
20	QPSK	17.93	20.74	17.97	19.77	17.86	19.21
	16QAM	17.92	20.58	17.97	19.77	17.88	19.42
	64QAM	17.91	20.58	17.93	19.39	17.90	19.22



## LTE Band 2 99%&amp;26dB Bandwidth

## 1.4MHz/QPSK/ LCH



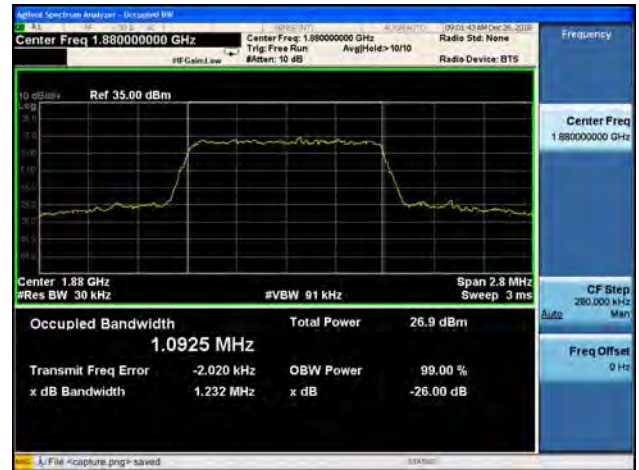
## 1.4MHz/16QAM/ LCH



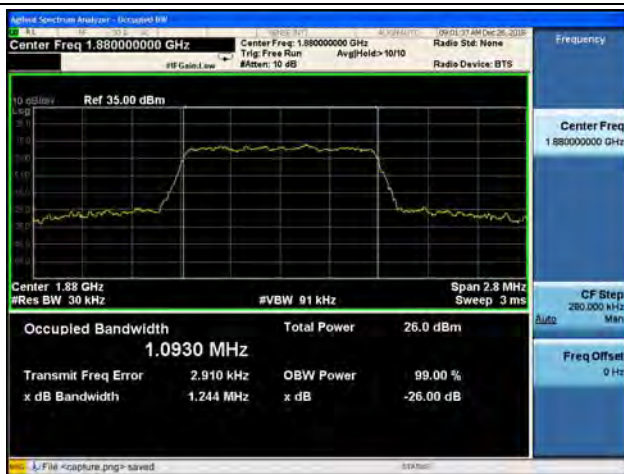
## 1.4MHz/ 64QAM / LCH



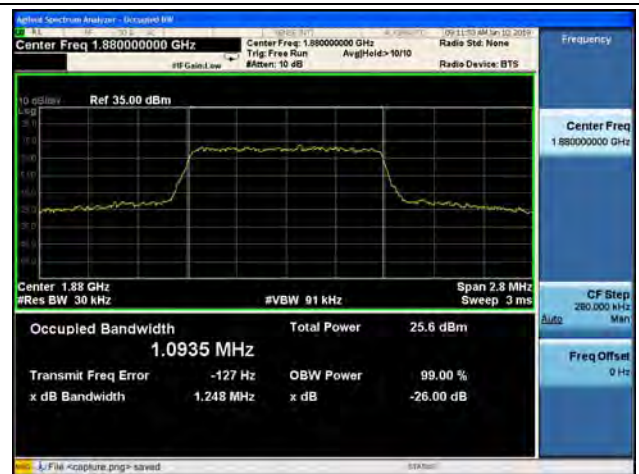
## 1.4MHz/QPSK/ MCH



## 1.4MHz/16QAM/ MCH



## 1.4MHz/64QAM/ MCH





## 1.4MHz/ QPSK / HCH



## 1.4MHz/ 16QAM/ HCH



## 1.4MHz/ 64QAM/ HCH

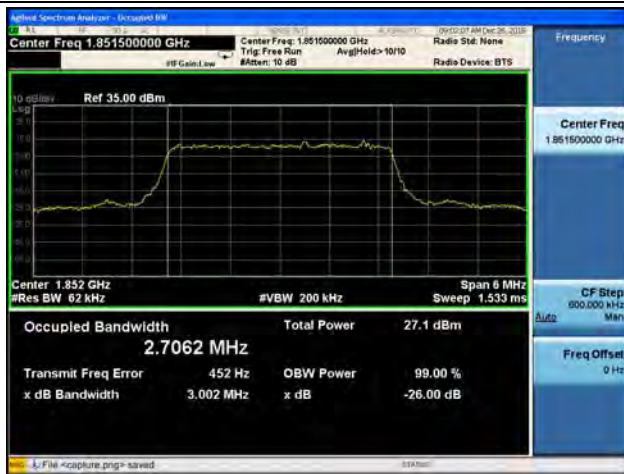




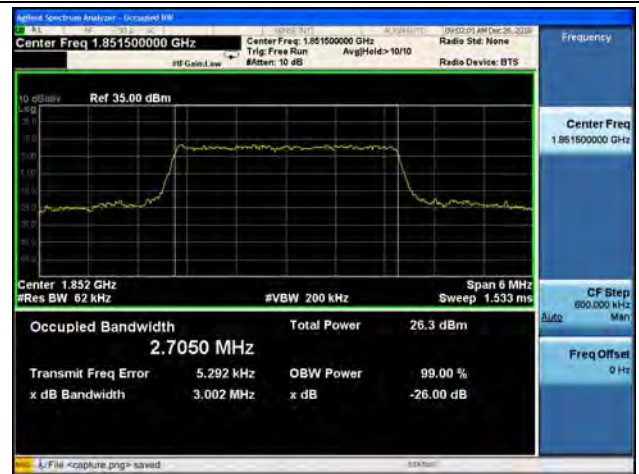


## LTE Band 2 99%&amp;26dB Bandwidth

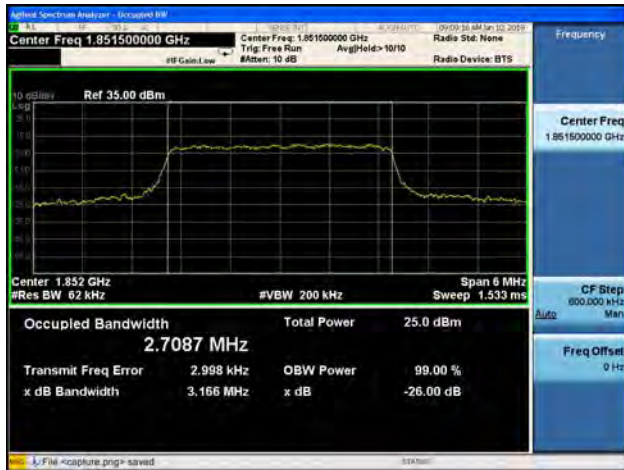
## 3MHz/QPSK / LCH



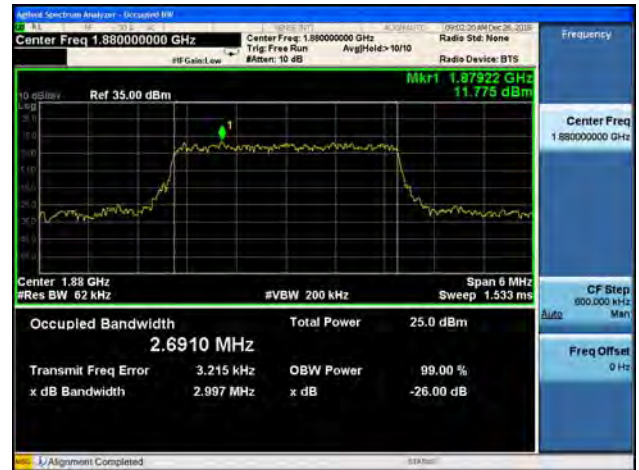
## 3MHz/16QAM / LCH



## 3MHz/ 64QAM / LCH



## 3MHz/QPSK / MCH

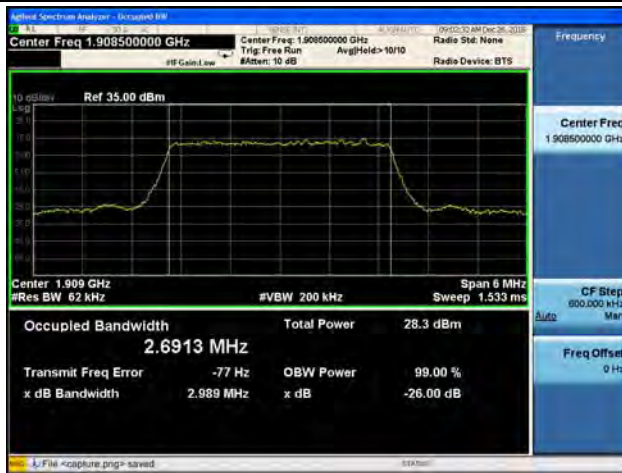
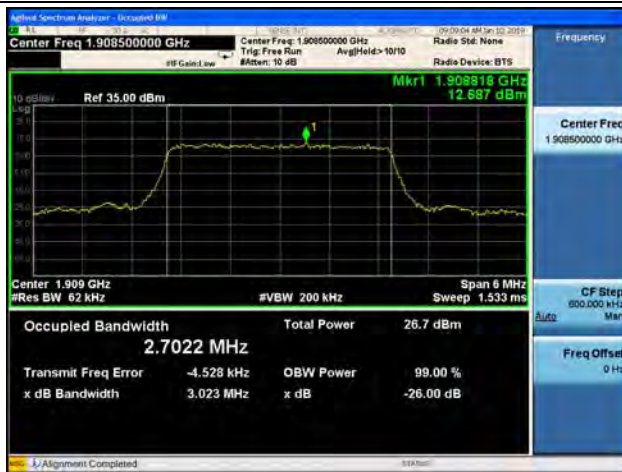


## 3MHz/ 16QAM / MCH



## 3MHz/ 64QAM/ MCH



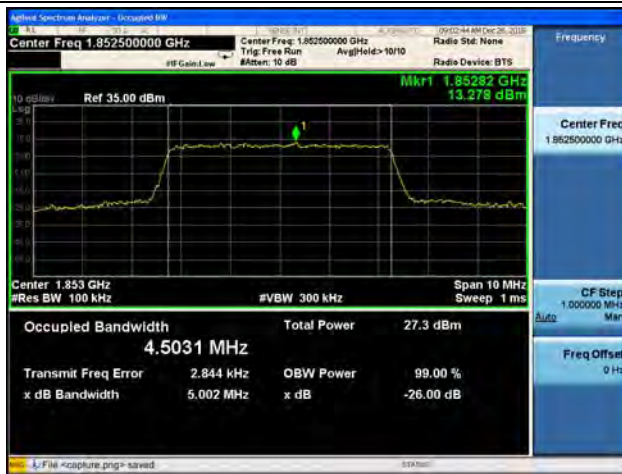
**3MHz/ QPSK / HCH****3MHz/ 16QAM/ HCH****3MHz/ 64QAM/ HCH**



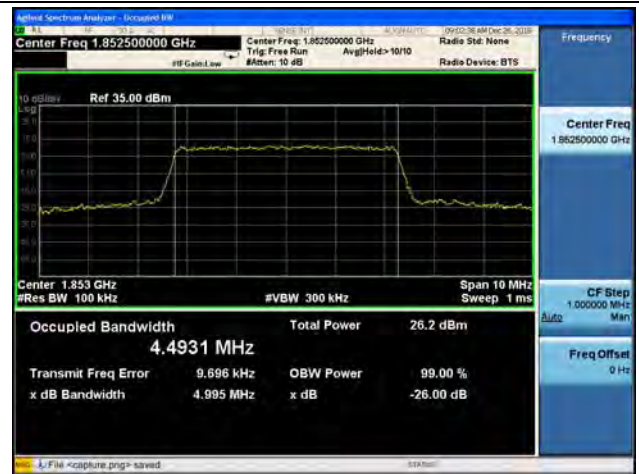


## LTE Band 2 99%&amp;26dB Bandwidth

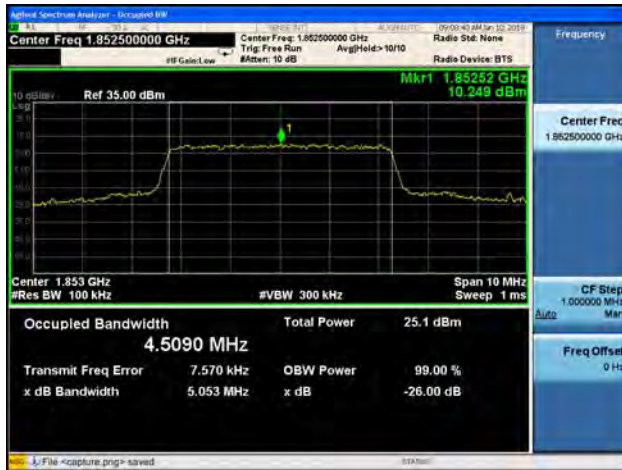
## 5MHz/QPSK / LCH



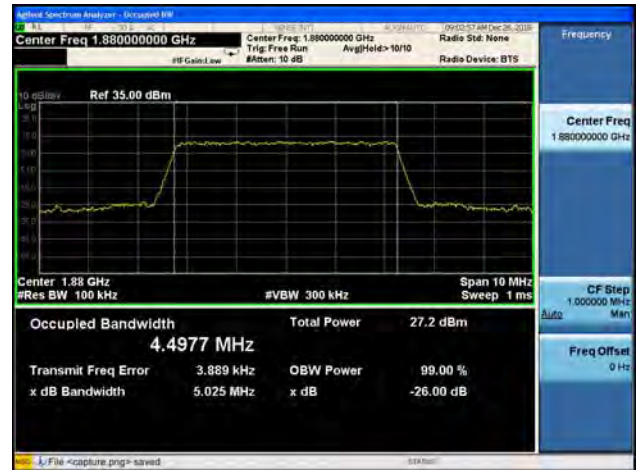
## 5MHz/16QAM / LCH



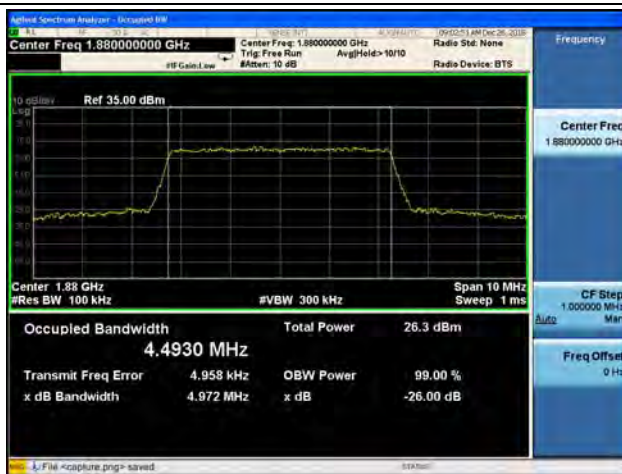
## 5MHz/ 64QAM / LCH



## 5MHz/QPSK / MCH



## 5MHz/ 16QAM / MCH

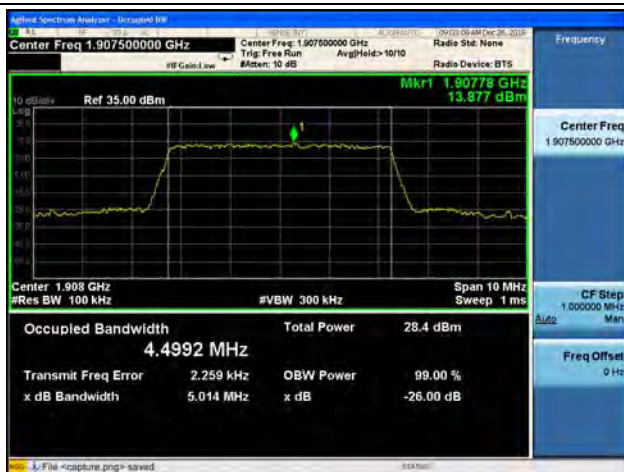


## 5MHz/ 64QAM/ MCH

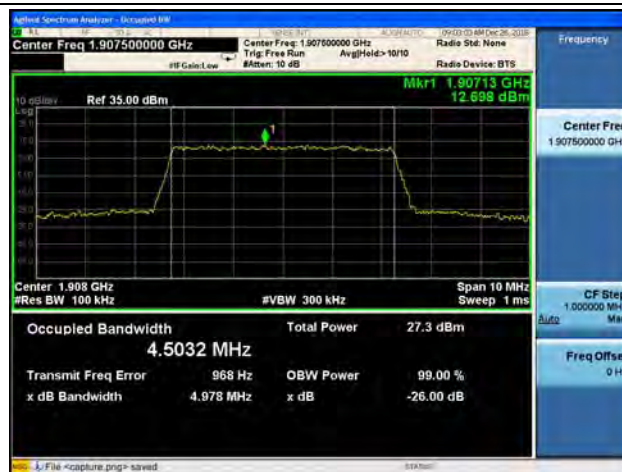




## 5MHz/ QPSK / HCH



## 5MHz/ 16QAM/ HCH



## 5MHz/ 64QAM/ HCH





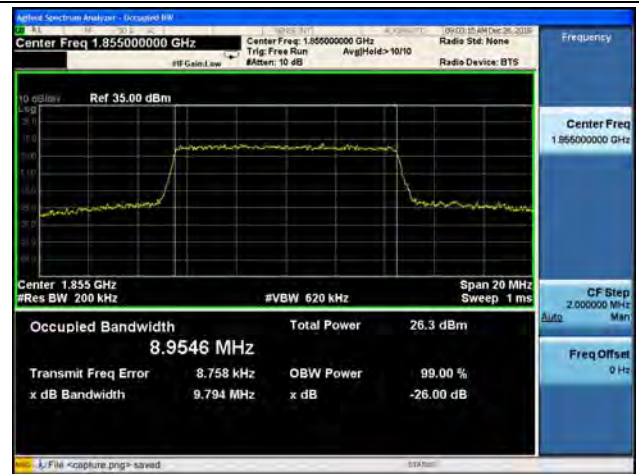


## LTE Band 2 99%&amp;26dB Bandwidth

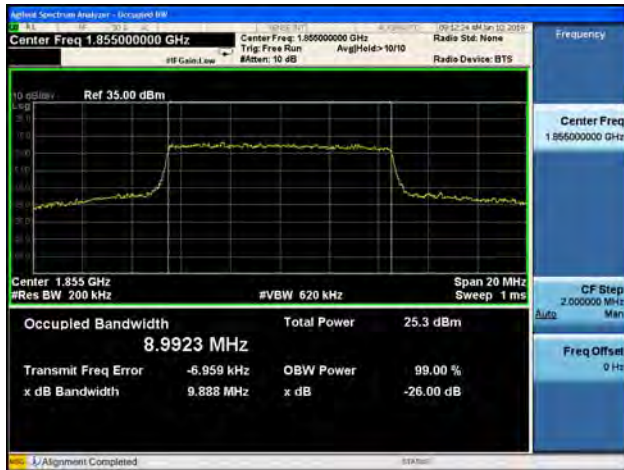
## 10MHz/QPSK / LCH



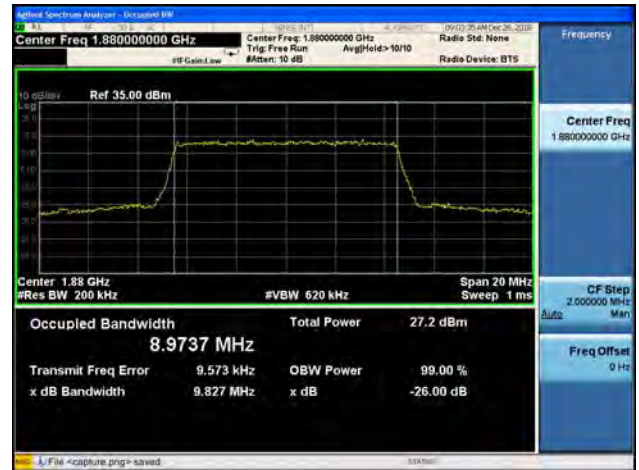
## 10MHz/16QAM / LCH



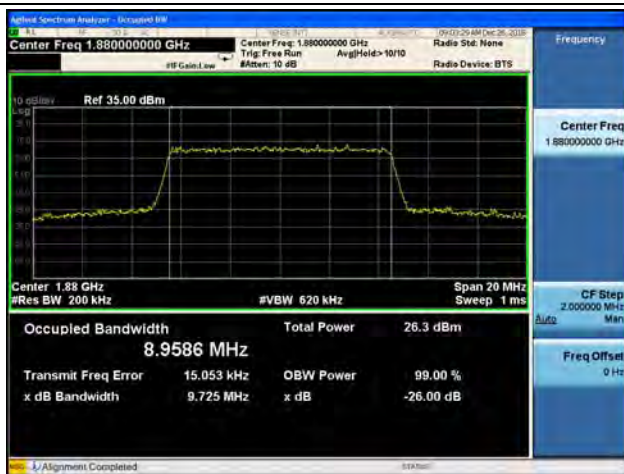
## 10MHz/ 64QAM / LCH



## 10MHz/QPSK / MCH



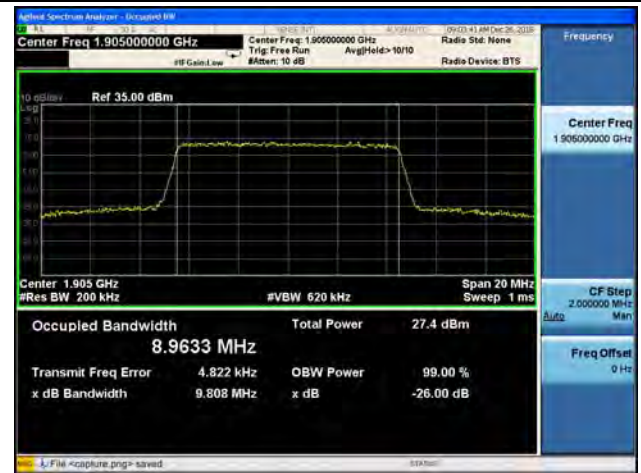
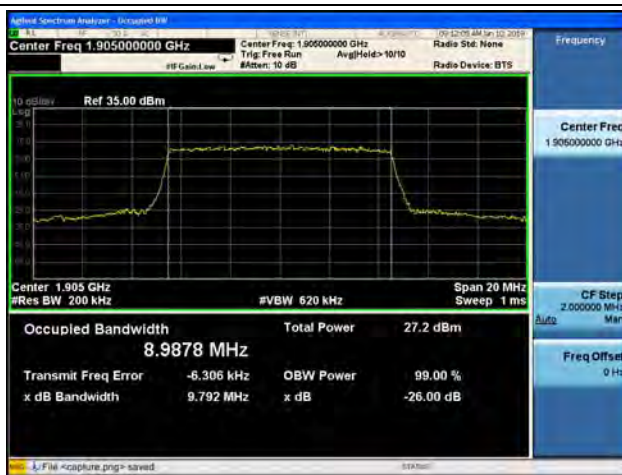
## 10MHz/ 16QAM / MCH



## 10MHz/ 64QAM/ MCH



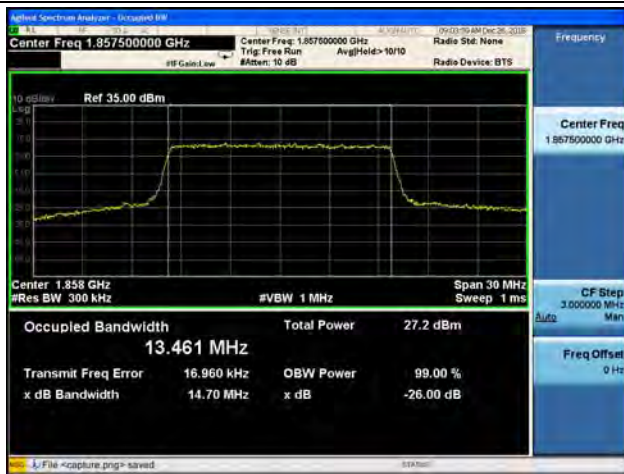


**10MHz/ QPSK / HCH****10MHz/ 16QAM/ HCH****10MHz/ 64QAM/ HCH**

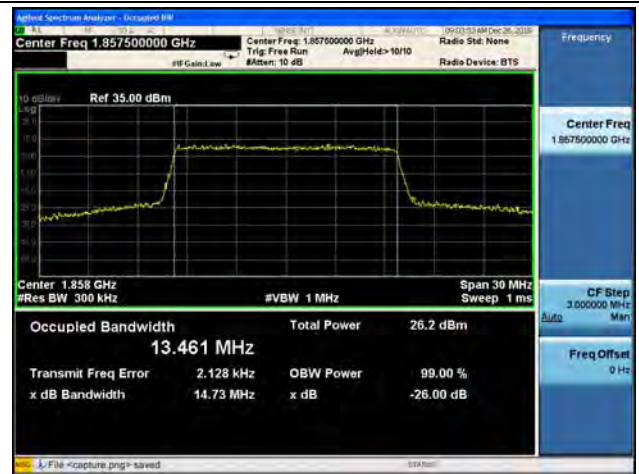


## LTE Band 2 99%&amp;26dB Bandwidth

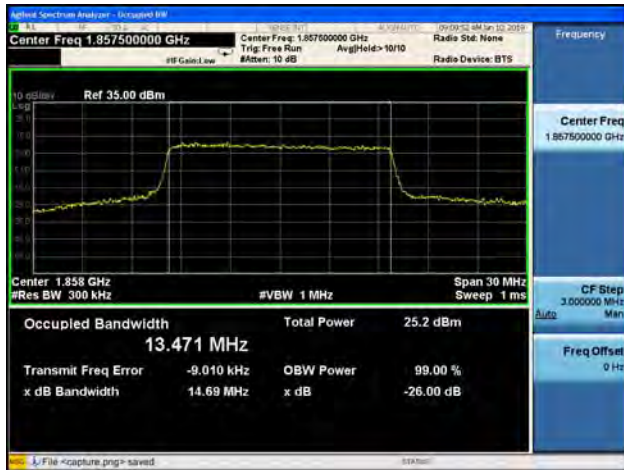
## 15MHz/QPSK / LCH



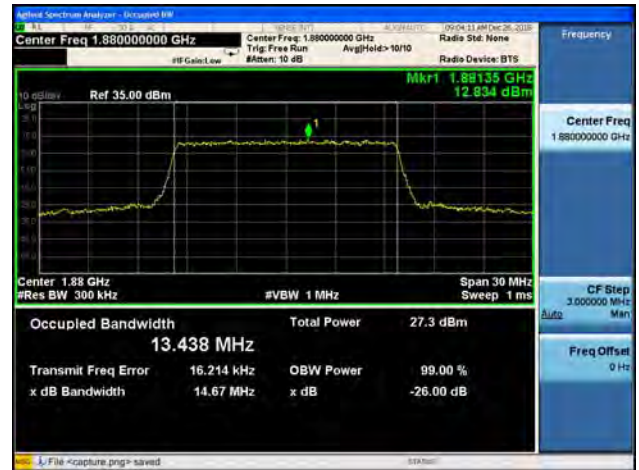
## 15MHz/16QAM / LCH



## 15MHz/ 64QAM / LCH



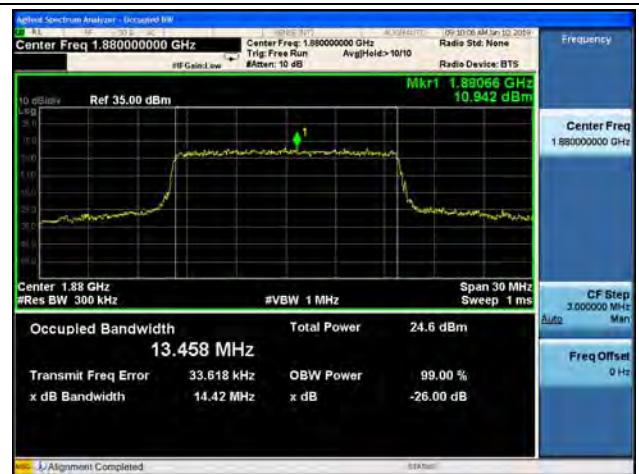
## 15MHz/QPSK / MCH

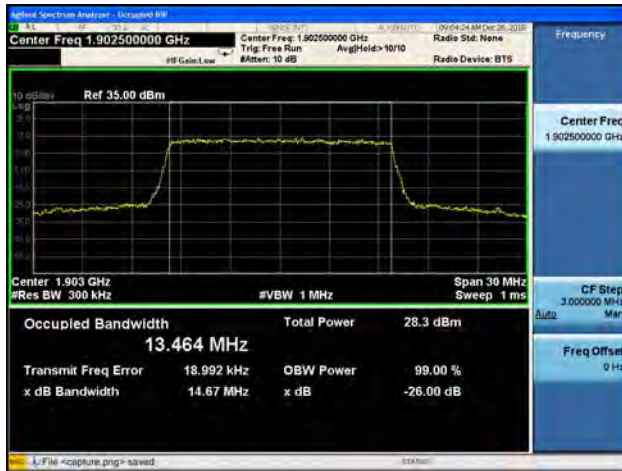
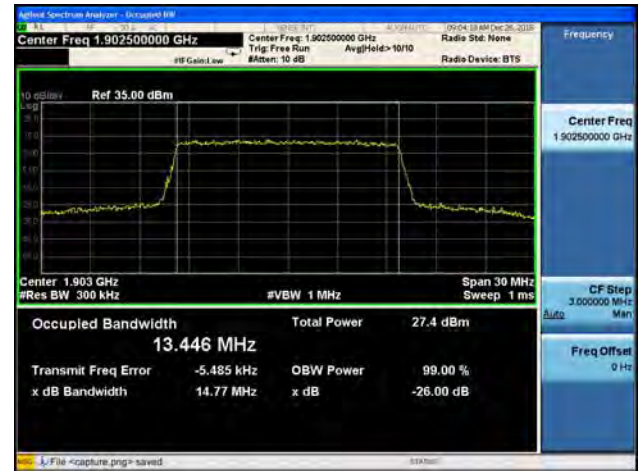
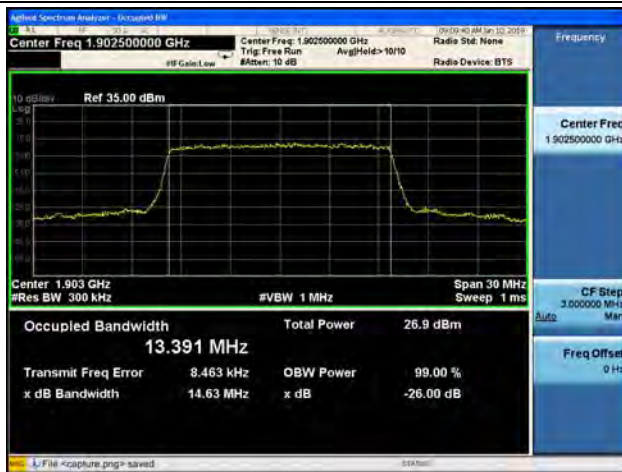


## 15MHz/ 16QAM / MCH



## 15MHz/ 64QAM/ MCH

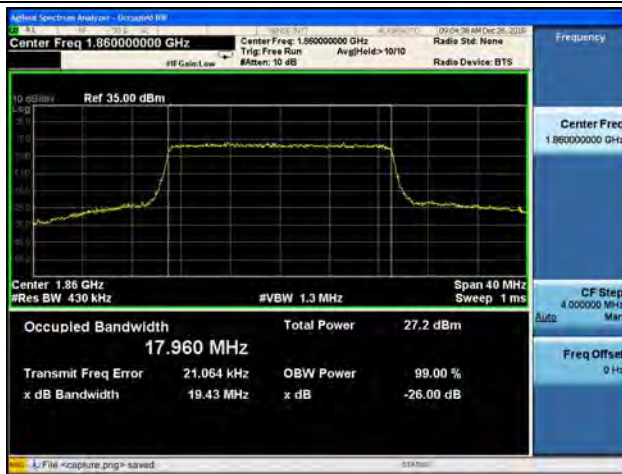


**15MHz/ QPSK / HCH****15MHz/ 16QAM/ HCH****15MHz/ 64QAM/ HCH**

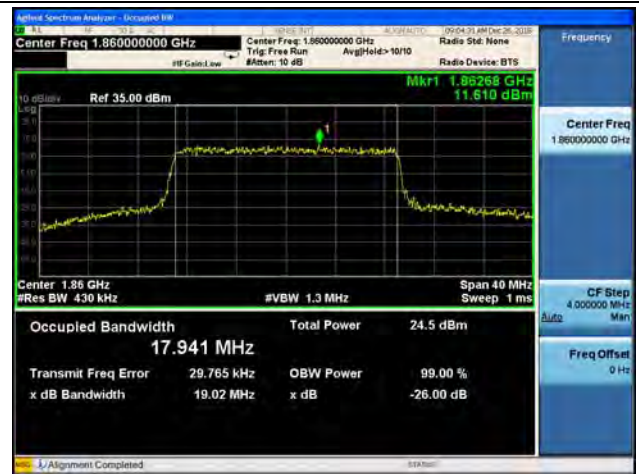


## LTE Band 2 99%&26dB Bandwidth

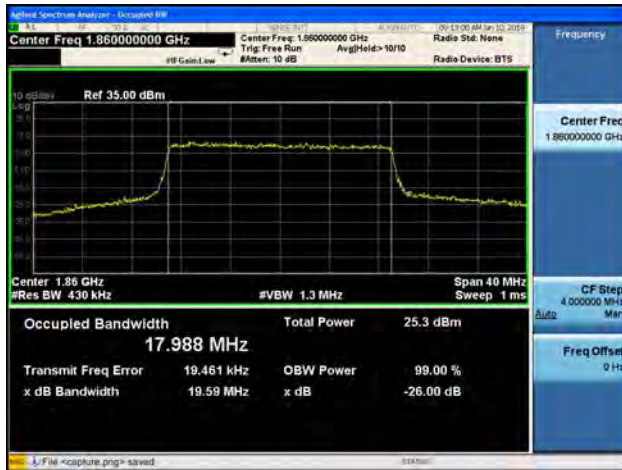
### 20MHz/QPSK / LCH



### 20MHz/16QAM / LCH



### 20MHz/ 64QAM / LCH



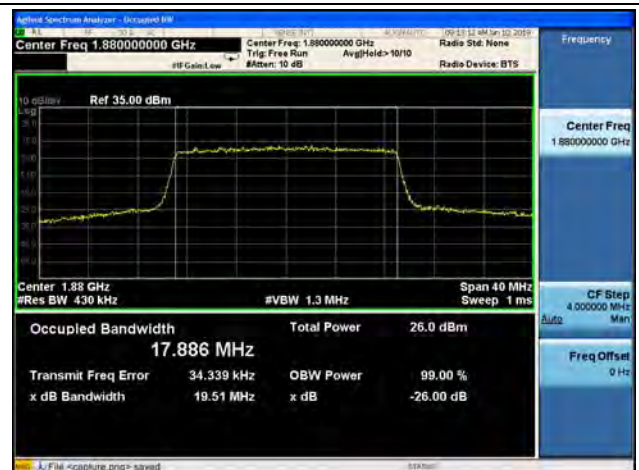
### 20MHz/QPSK / MCH



### 20MHz/ 16QAM / MCH

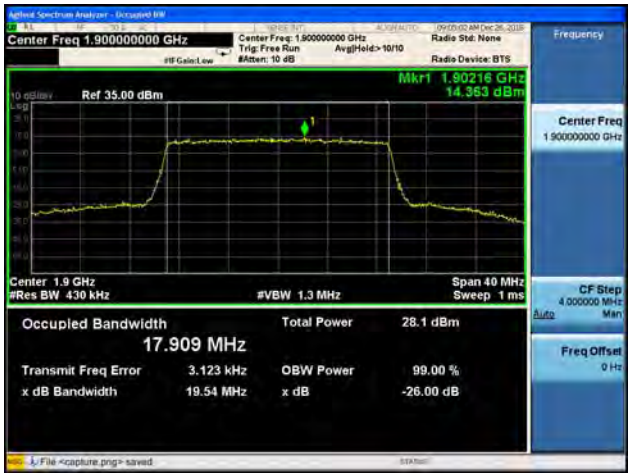


### 20MHz/ 64QAM/ MCH





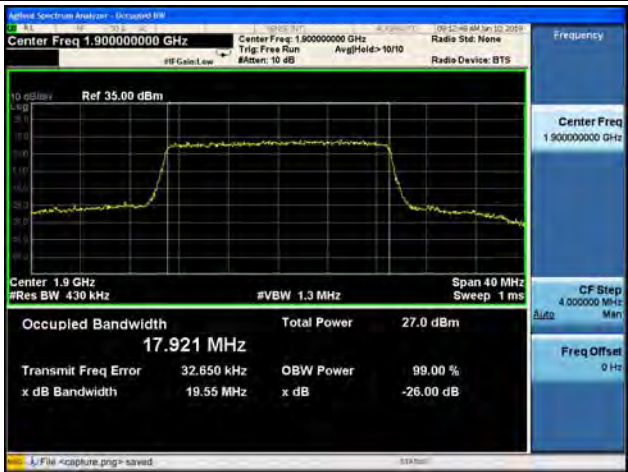
20MHz/ QPSK / HCH



20MHz/ 16QAM/ HCH



20MHz/ 64QAM/ HCH

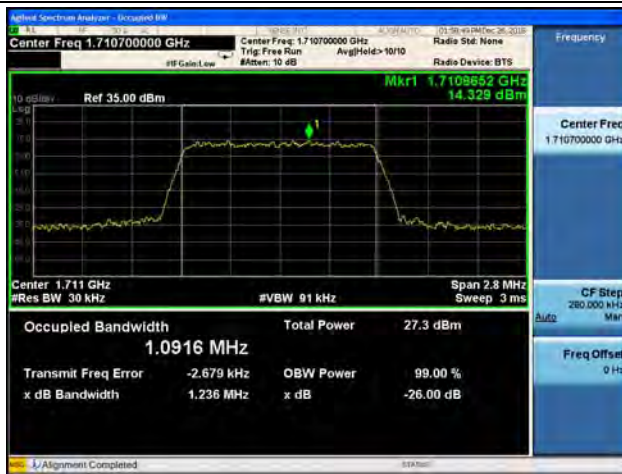




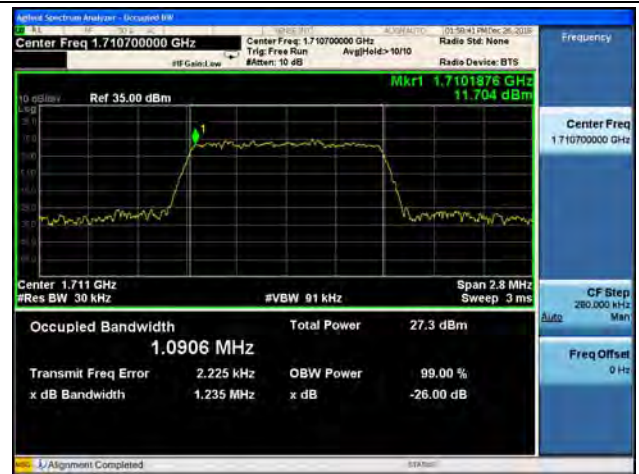


## LTE Band 4 99%&amp;26dB Bandwidth

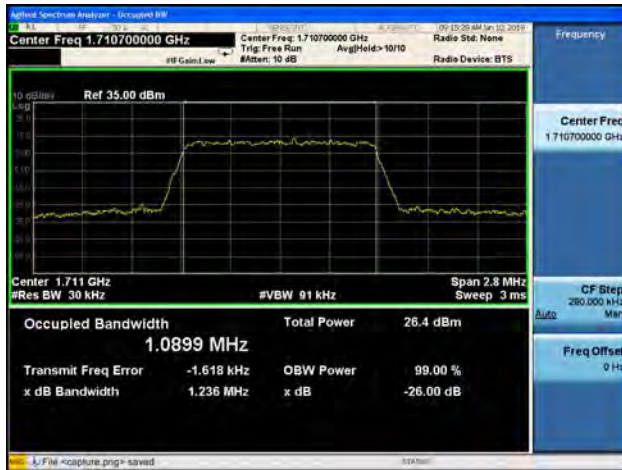
## 1.4MHz/QPSK / LCH



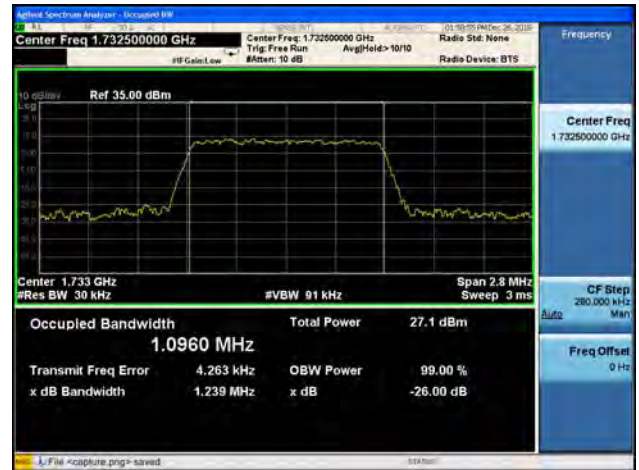
## 1.4MHz/16QAM / LCH



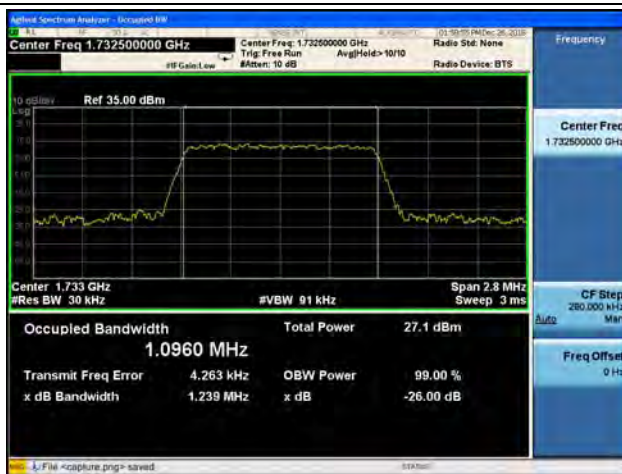
## 1.4MHz/ 64QAM / LCH



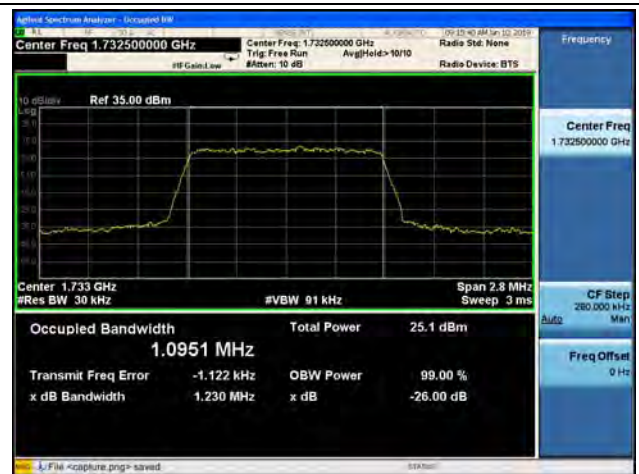
## 1.4MHz/QPSK / MCH



## 1.4MHz/ 16QAM / MCH

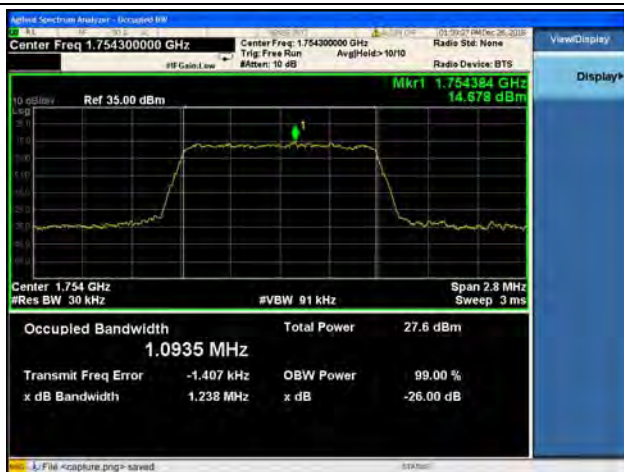


## 1.4MHz/ 64QAM/ MCH





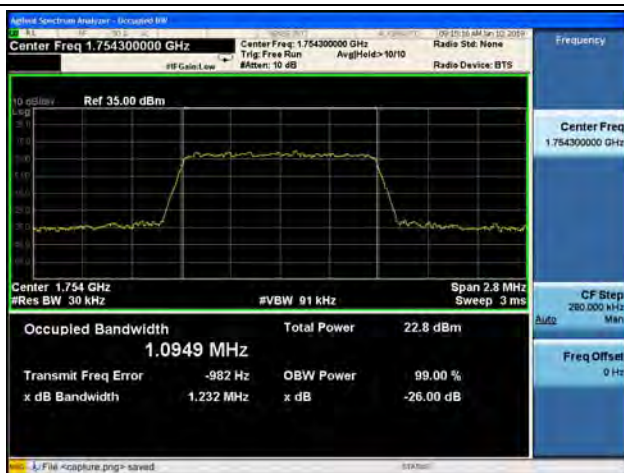
## 1.4MHz/ QPSK / HCH



## 1.4MHz/ 16QAM/ HCH



## 1.4MHz/ 64QAM/ HCH

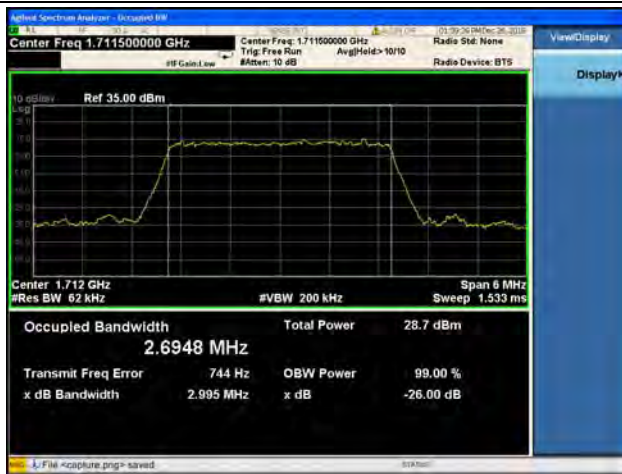




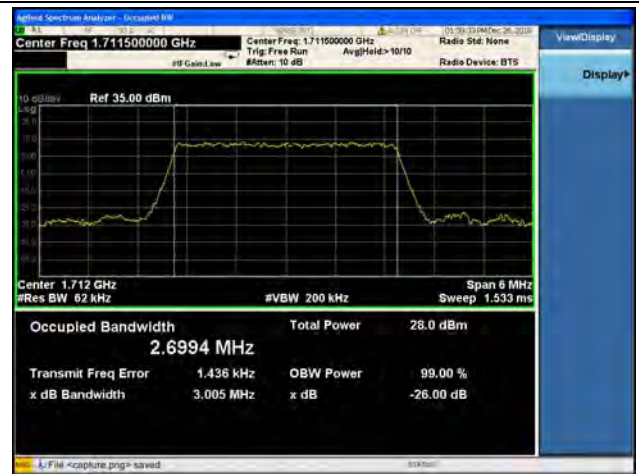


## LTE Band 4 99%&amp;26dB Bandwidth

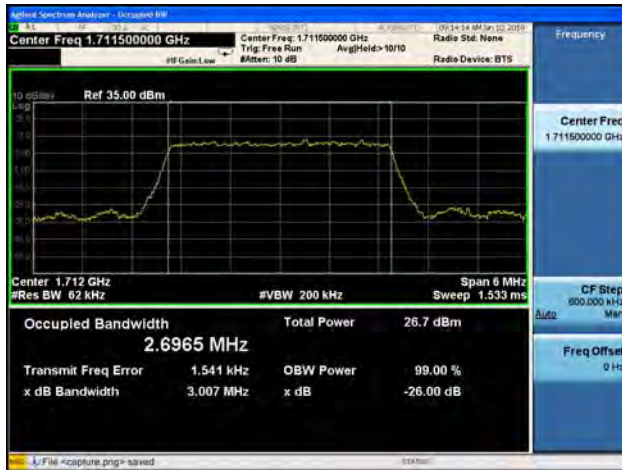
## 3MHz/QPSK / LCH



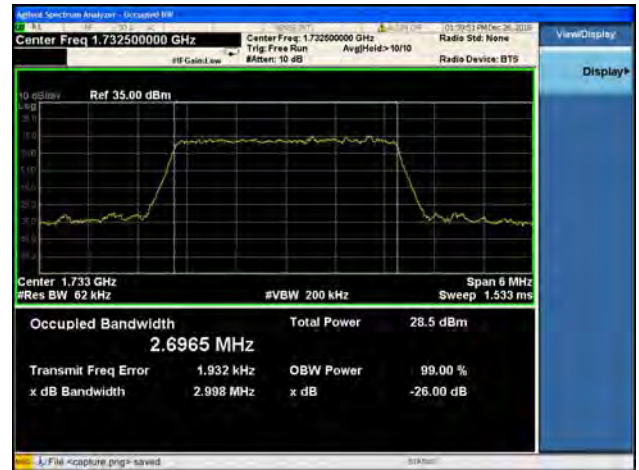
## 3MHz/16QAM / LCH



## 3MHz/ 64QAM / LCH



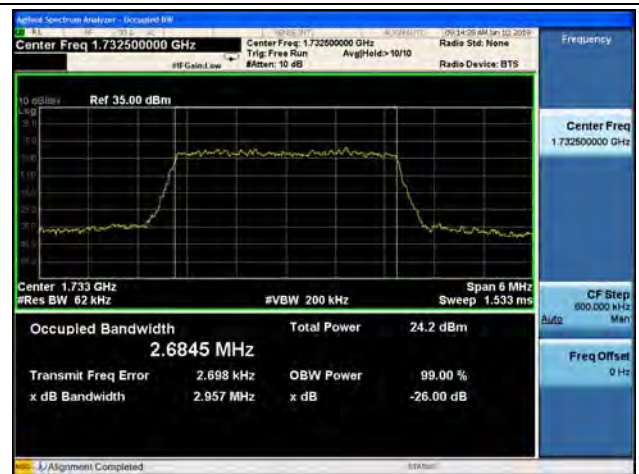
## 3MHz/QPSK / MCH



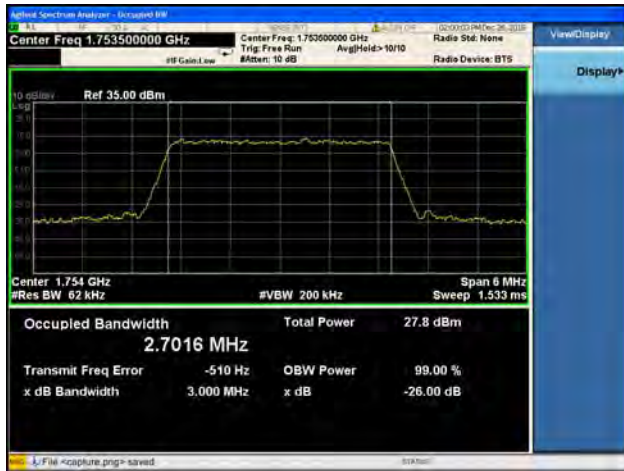
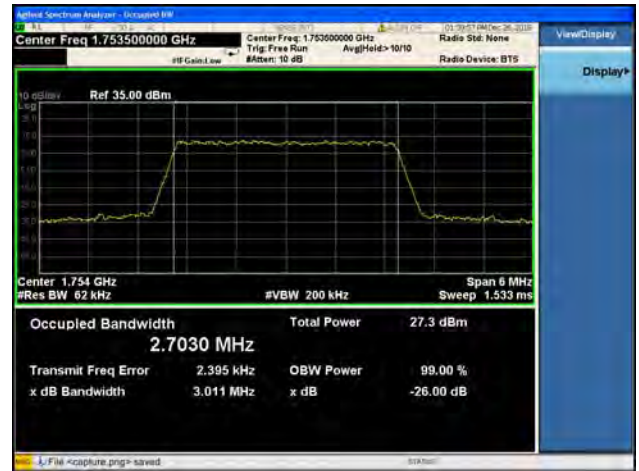
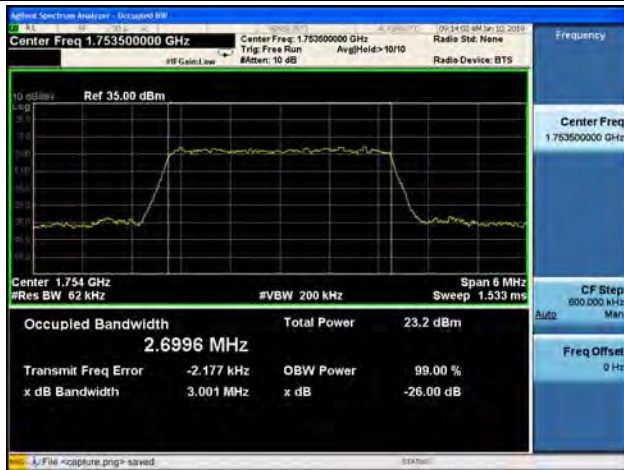
## 3MHz/ 16QAM / MCH



## 3MHz/ 64QAM/ MCH



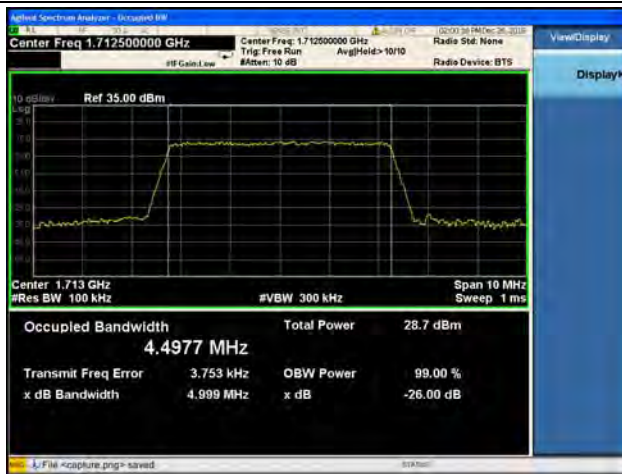


**3MHz/ QPSK / HCH****3MHz/ 16QAM/ HCH****3MHz/ 64QAM/ HCH**

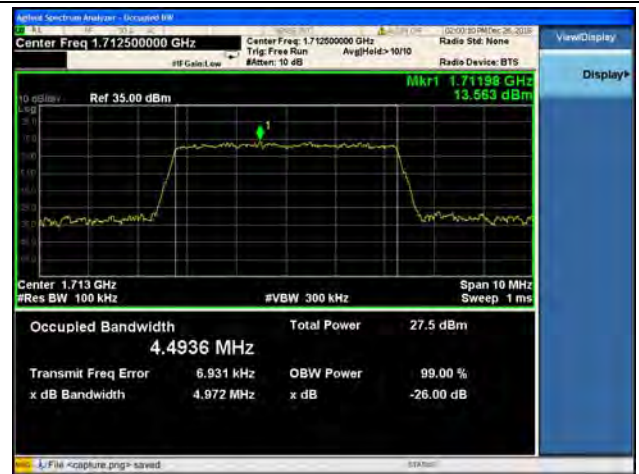


## LTE Band 4 99%&amp;26dB Bandwidth

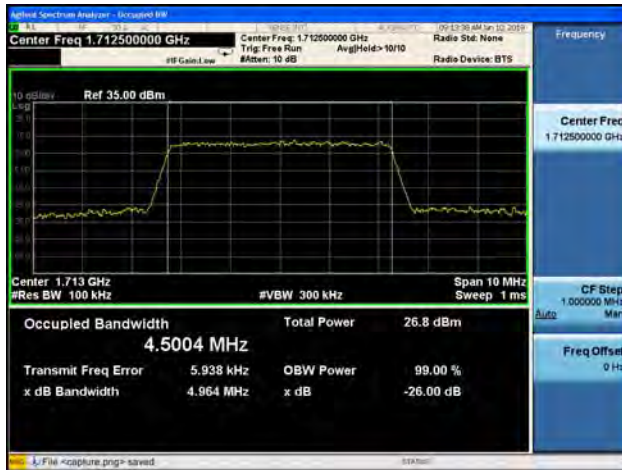
## 5MHz/QPSK / LCH



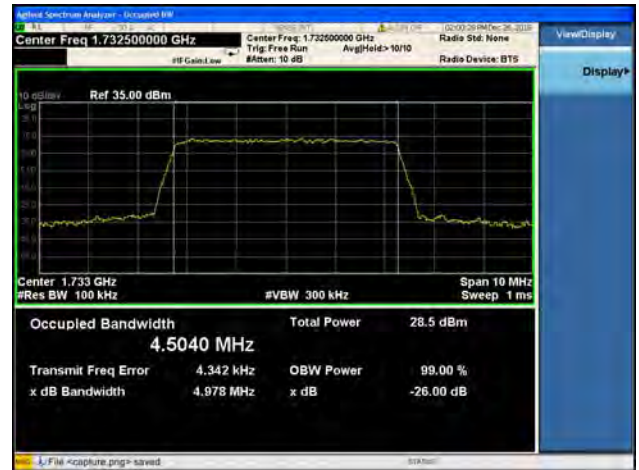
## 5MHz/16QAM / LCH



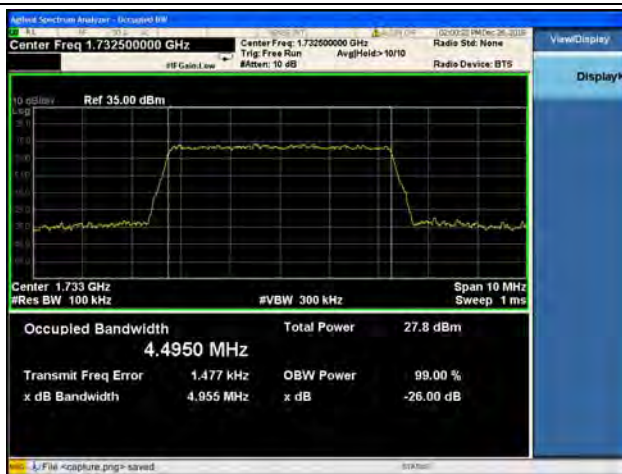
## 5MHz/ 64QAM / LCH



## 5MHz/QPSK / MCH

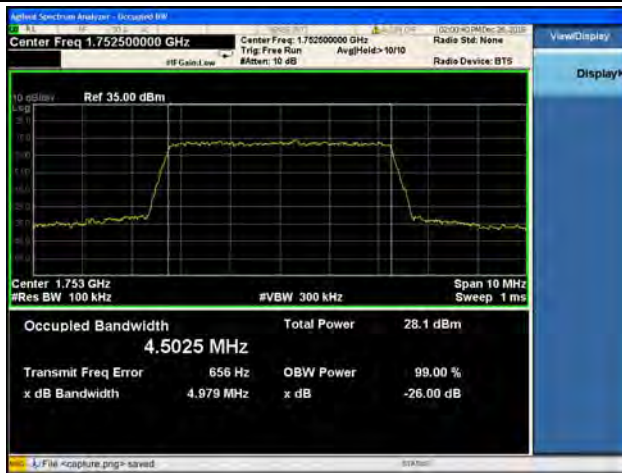
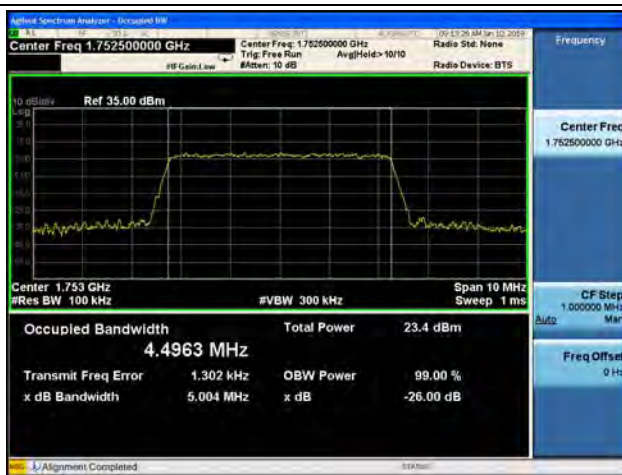


## 5MHz/ 16QAM / MCH



## 5MHz/ 64QAM/ MCH

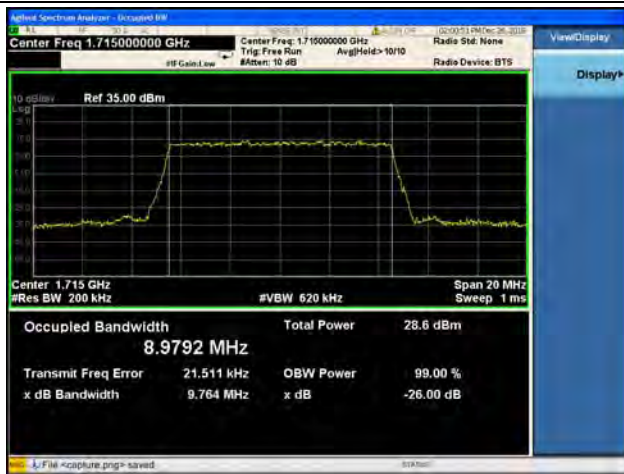


**5MHz/ QPSK / HCH****5MHz/ 16QAM/ HCH****5MHz/ 64QAM/ HCH**

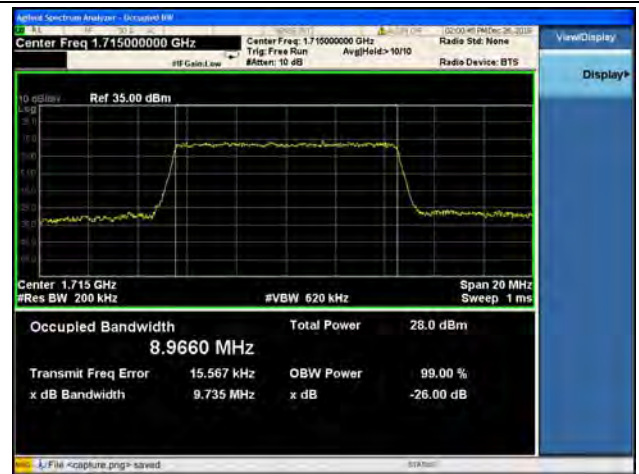


### LTE Band 4 99%&26dB Bandwidth

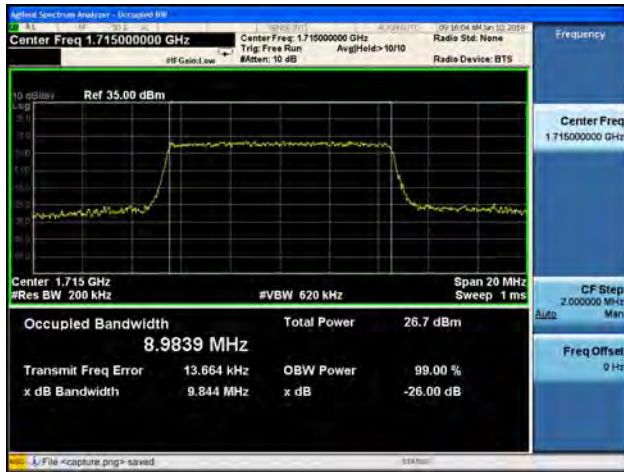
#### 10MHz/QPSK / LCH



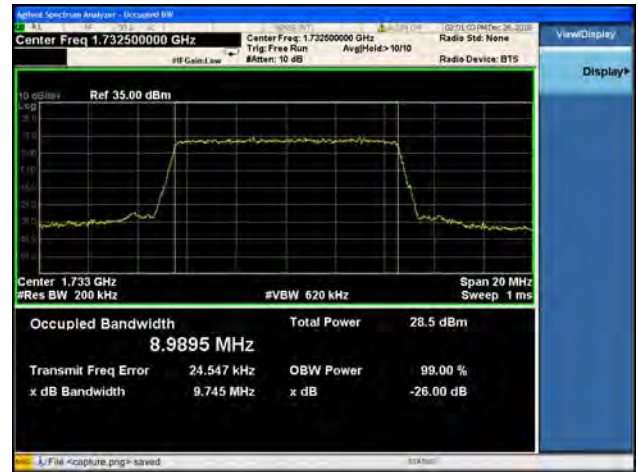
#### 10MHz/16QAM / LCH



#### 10MHz/ 64QAM / LCH



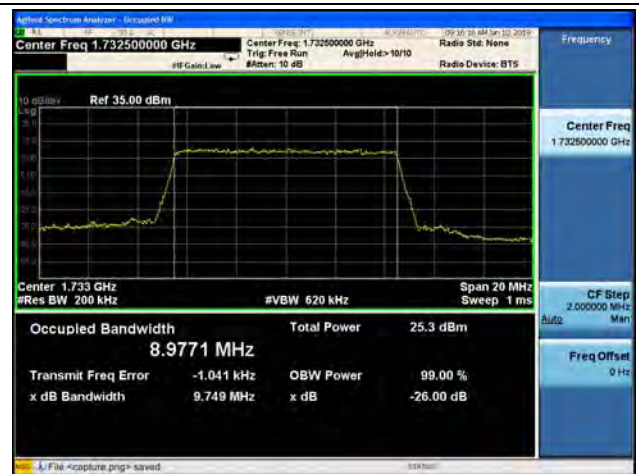
#### 10MHz/QPSK / MCH



#### 10MHz/ 16QAM / MCH



#### 10MHz/ 64QAM/ MCH

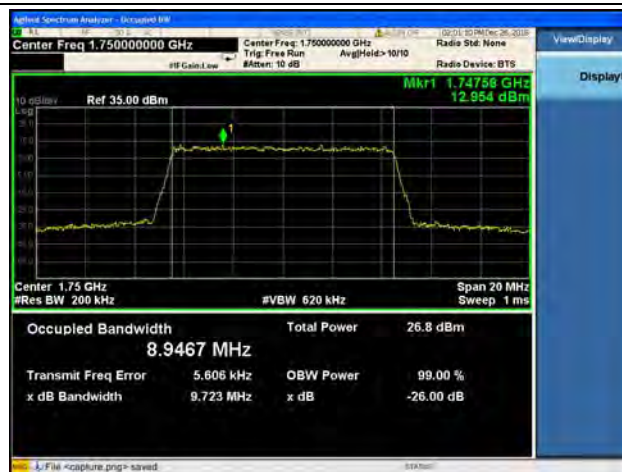




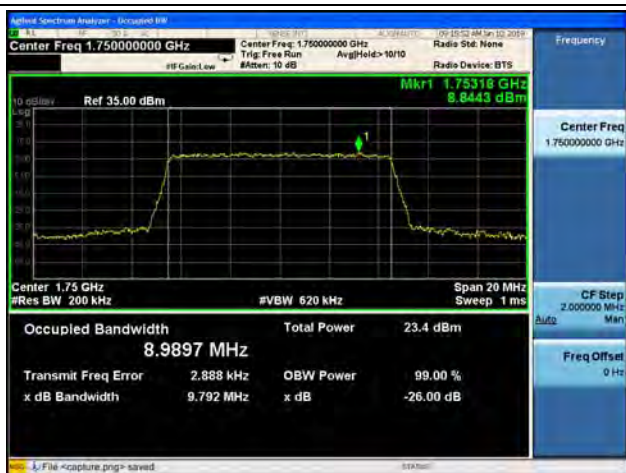
## 10MHz/ QPSK / HCH



## 10MHz/ 16QAM/ HCH



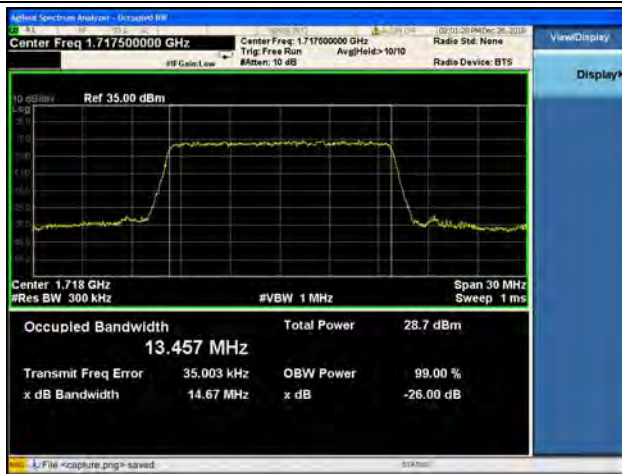
## 10MHz/ 64QAM/ HCH



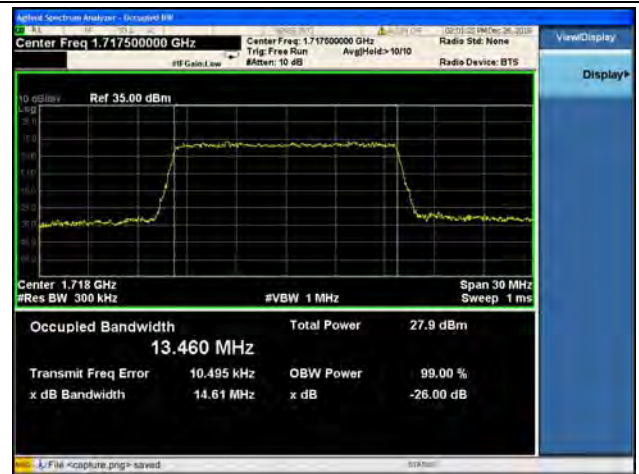


### LTE Band 4 99%&26dB Bandwidth

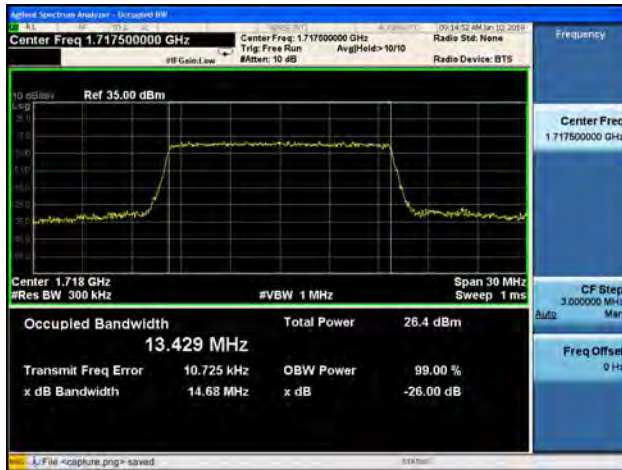
#### 15MHz/QPSK / LCH



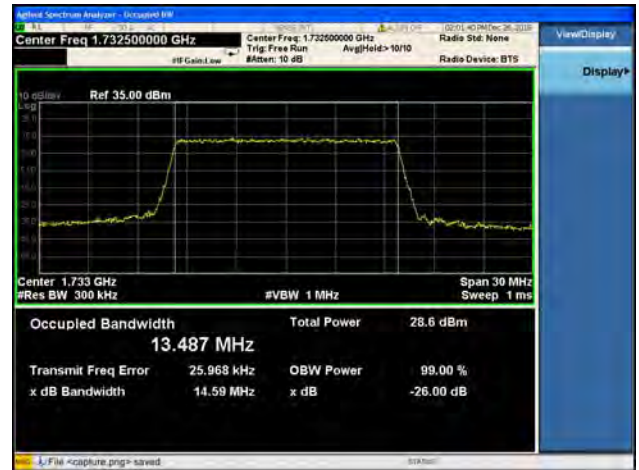
#### 15MHz/16QAM / LCH



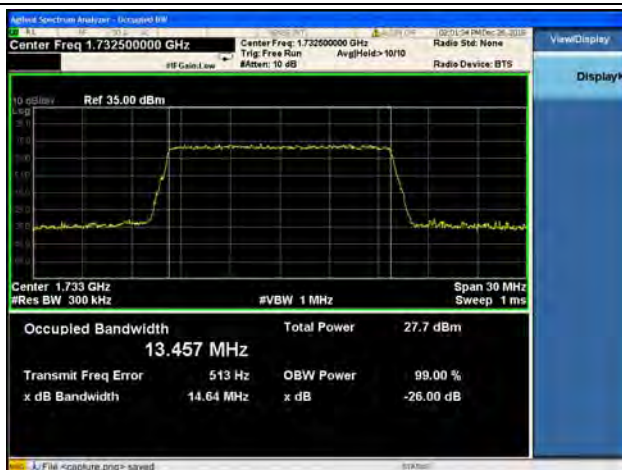
#### 15MHz/ 64QAM / LCH



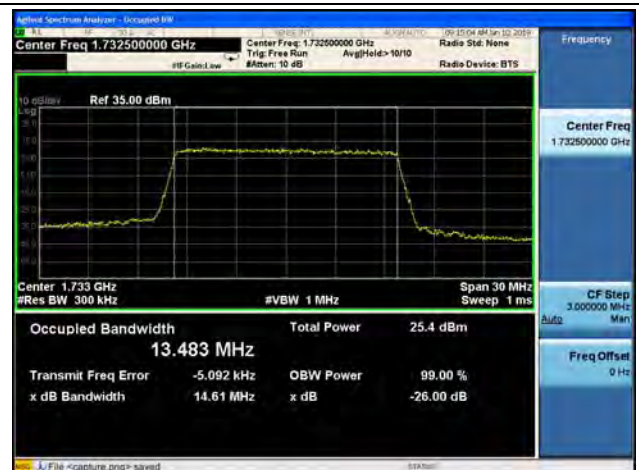
#### 15MHz/QPSK / MCH

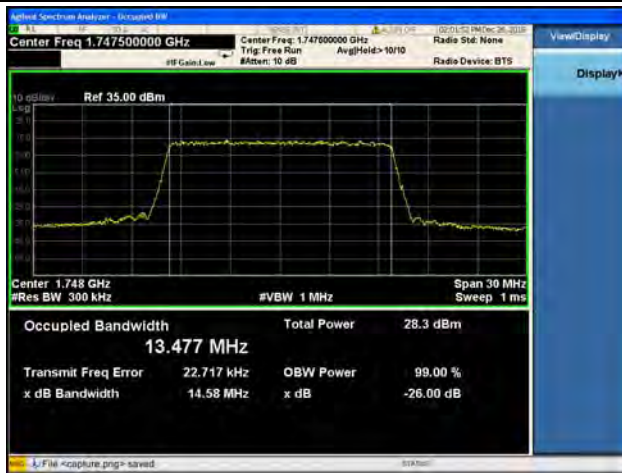
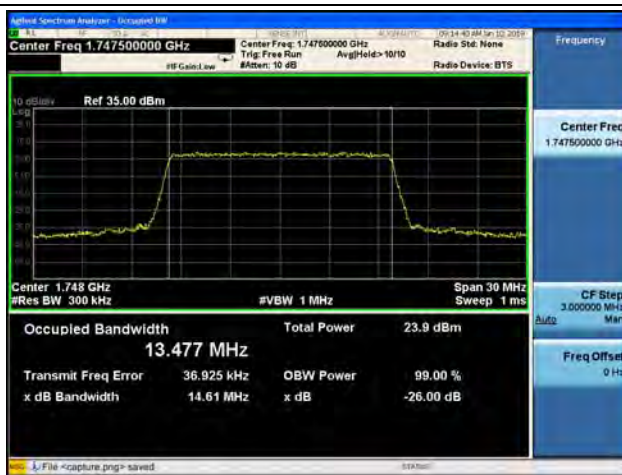


#### 15MHz/ 16QAM / MCH



#### 15MHz/ 64QAM/ MCH



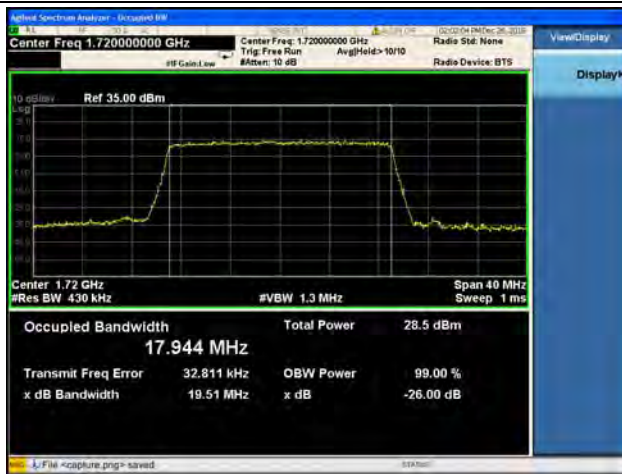
**15MHz/ QPSK / HCH****15MHz/ 16QAM/ HCH****15MHz/ 64QAM/ HCH**



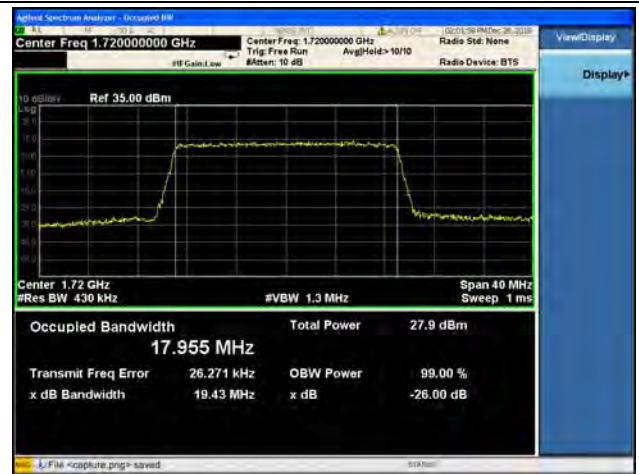


## LTE Band 4 99%&amp;26dB Bandwidth

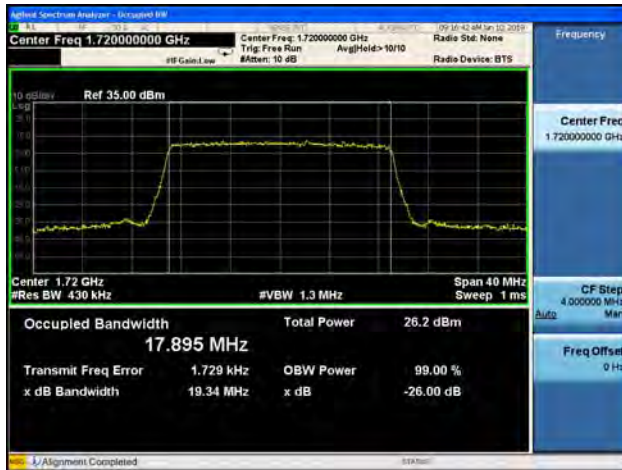
## 20MHz/QPSK / LCH



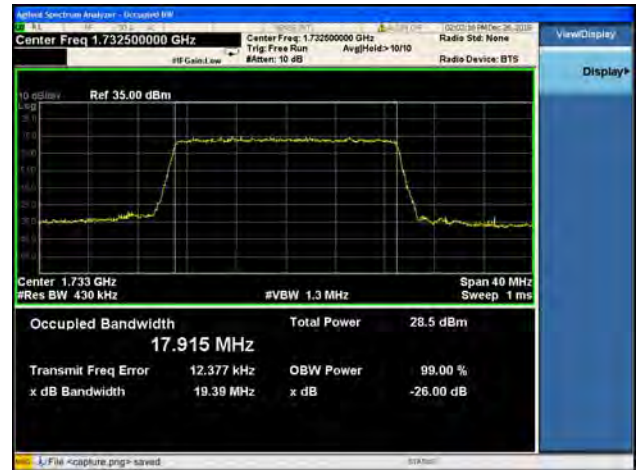
## 20MHz/16QAM / LCH



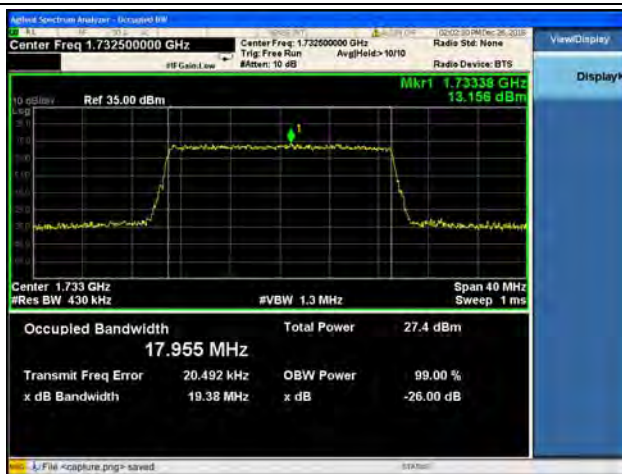
## 20MHz/ 64QAM / LCH



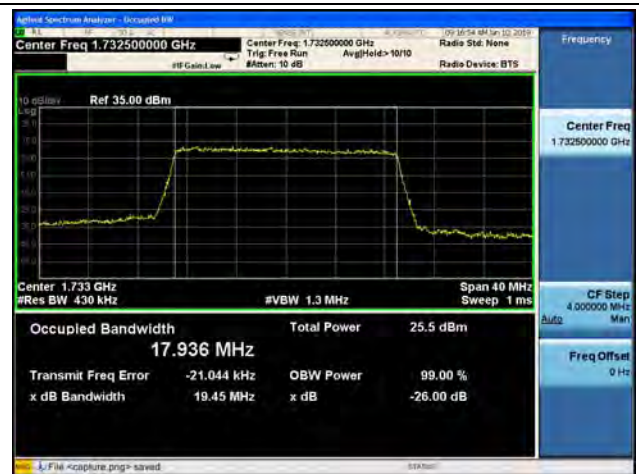
## 20MHz/QPSK / MCH



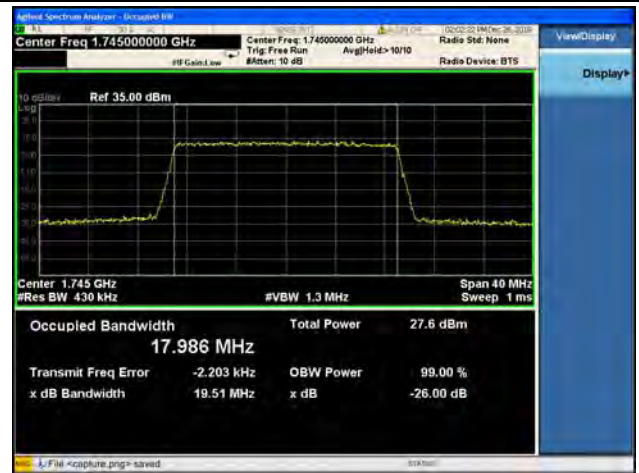
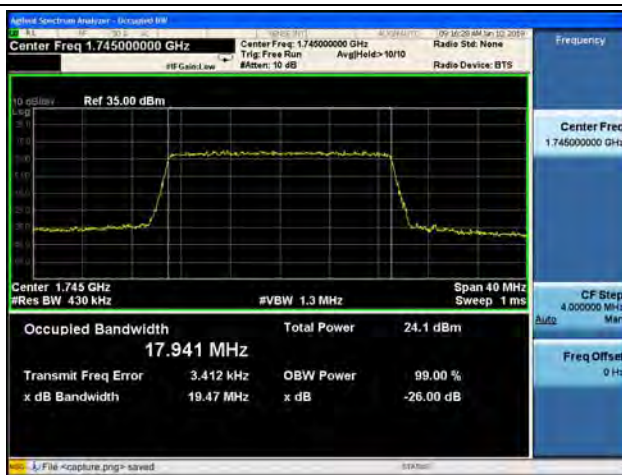
## 20MHz/ 16QAM / MCH



## 20MHz/ 64QAM/ MCH





**20MHz/ QPSK / HCH****20MHz/ 16QAM/ HCH****20MHz/ 64QAM/ HCH**

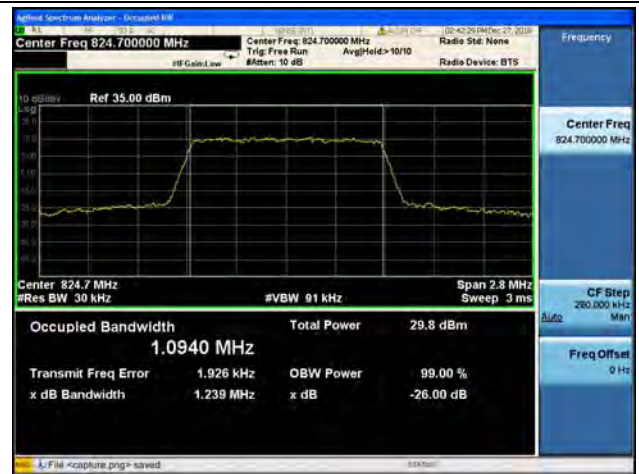


## LTE Band 5 99%&amp;26dB Bandwidth

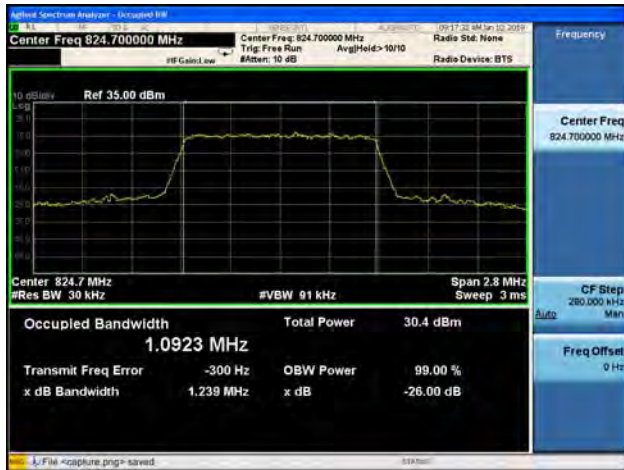
## 1.4MHz/QPSK / LCH



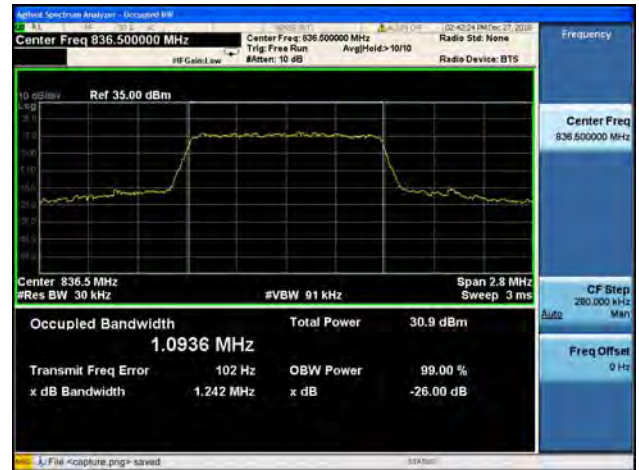
## 1.4MHz/16QAM / LCH



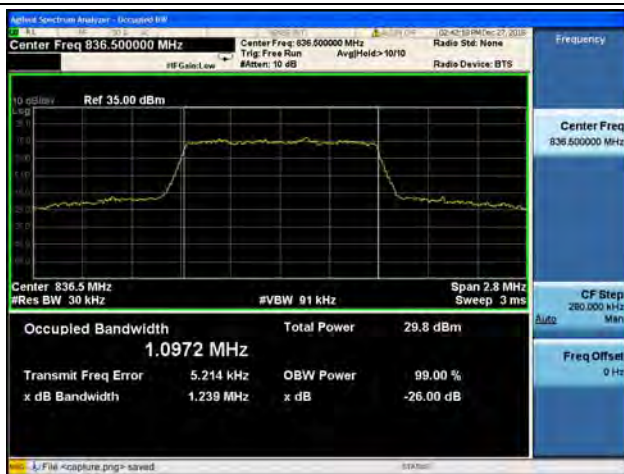
## 1.4MHz/ 64QAM / LCH



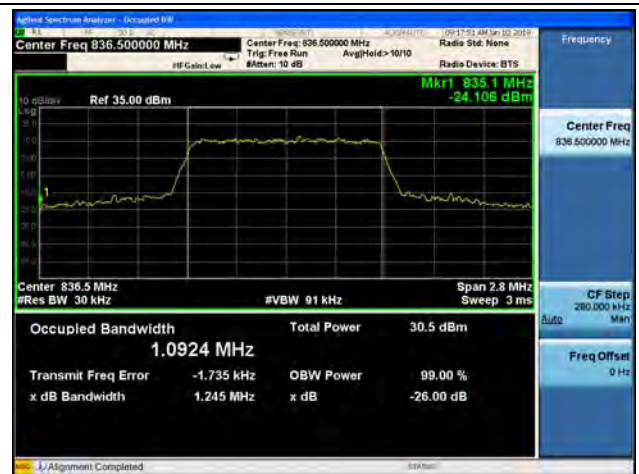
## 1.4MHz/QPSK / MCH



## 1.4MHz/ 16QAM / MCH



## 1.4MHz/ 64QAM/ MCH

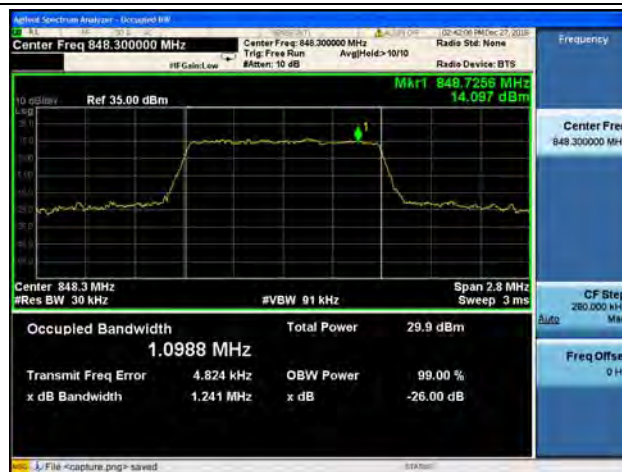




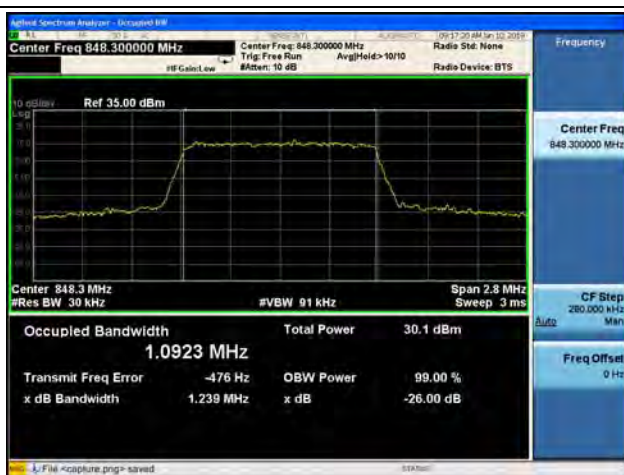
## 1.4MHz/ QPSK / HCH



## 1.4MHz/ 16QAM/ HCH



## 1.4MHz/ 64QAM/ HCH

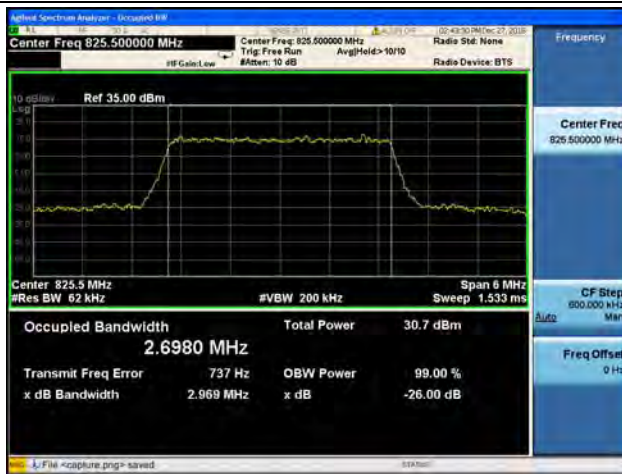






## LTE Band 5 99%&amp;26dB Bandwidth

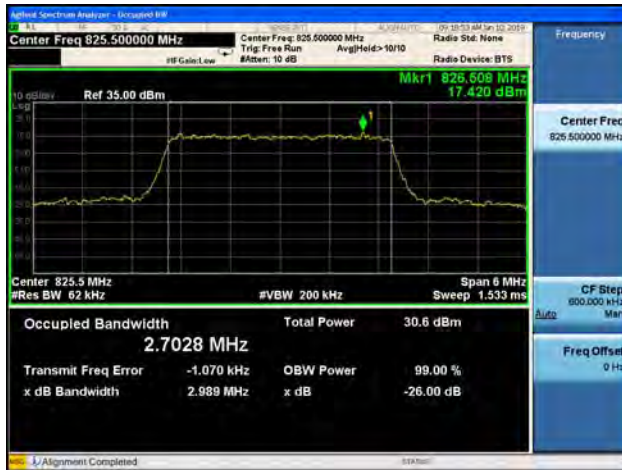
## 3MHz/QPSK / LCH



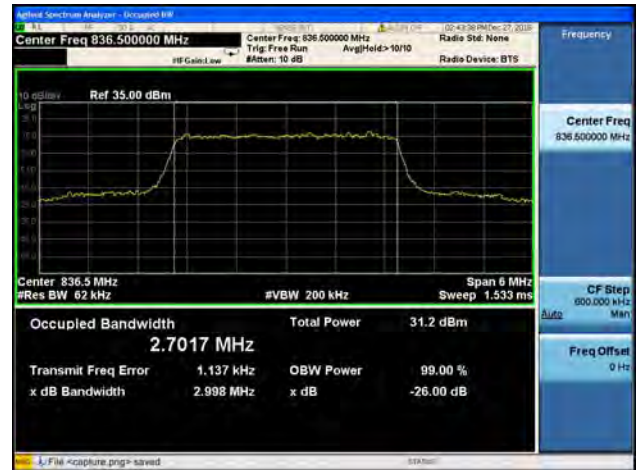
## 3MHz/16QAM / LCH



## 3MHz/ 64QAM / LCH



## 3MHz/QPSK / MCH



## 3MHz/ 16QAM / MCH



## 3MHz/ 64QAM/ MCH



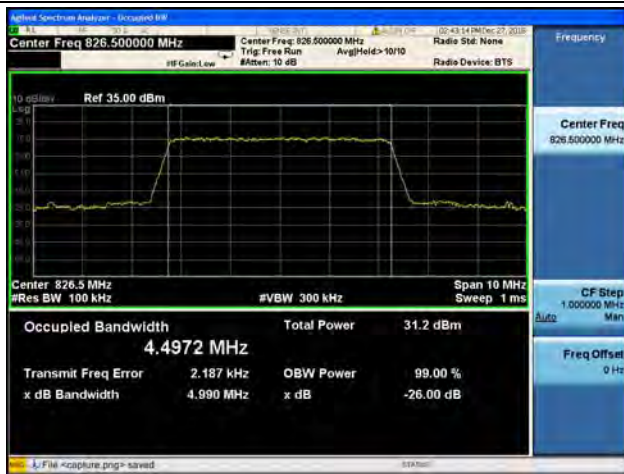
**3MHz/ QPSK / HCH****3MHz/ 16QAM/ HCH****3MHz/ 64QAM/ HCH**





## LTE Band 5 99%&amp;26dB Bandwidth

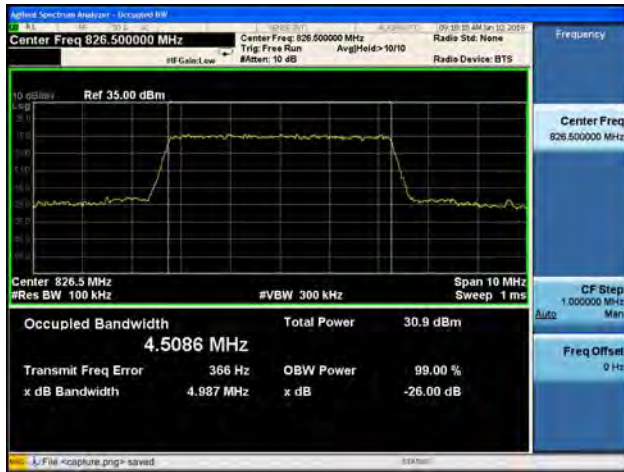
## 5MHz/QPSK / LCH



## 5MHz/16QAM / LCH



## 5MHz/ 64QAM / LCH



## 5MHz/QPSK / MCH



## 5MHz/ 16QAM / MCH



## 5MHz/ 64QAM/ MCH

