



























## Occupied Bandwidth

Mode	LTE Band 2 : 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	1.09	1.09	2.72	2.72	4.50	4.50	9.01	9.01	13.37	13.52	18.26	18.50
Middle CH	1.09	1.09	2.71	2.73	4.49	4.50	9.11	9.03	13.43	13.43	18.50	18.34
Highest CH	1.09	1.08	2.73	2.71	4.49	4.49	9.03	9.03	13.40	13.40	18.42	18.34
Mode	LTE Band 2 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09		2.71		4.46		9.01		13.40		18.38	
Middle CH	1.08		2.72		4.48		9.09		13.49		18.54	
Highest CH	1.09		2.73		4.51		9.01		13.43		18.30	

Mode	LTE Band 4 : 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	1.08	1.09	2.73	2.73	4.53	4.51	9.01	9.07	13.46	13.49	18.38	18.34
Middle CH	1.09	1.09	2.71	2.73	4.51	4.52	9.05	8.97	13.43	13.46	18.22	18.34
Highest CH	1.09	1.09	2.70	2.73	4.50	4.53	9.09	9.03	13.46	13.46	18.34	18.34
Mode	LTE Band 4 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09		2.73		4.50		9.03		13.49		18.50	
Middle CH	1.09		2.74		4.51		9.01		13.49		18.42	
Highest CH	1.09		2.72		4.49		9.01		13.19		18.38	



Mode	LTE Band 5 : 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	1.09	1.08	2.72	2.72	4.51	4.49	8.99	8.99				
Middle CH	1.09	1.10	2.72	2.73	4.48	4.49	9.03	8.99				
Highest CH	1.09	1.08	2.72	2.70	4.52	4.51	9.11	8.99				
Mode	LTE Band 5 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	1.09		2.72		4.48		9.03					
Middle CH	1.09		2.72		4.50		9.09					
Highest CH	1.09		2.72		4.48		9.03					

Mode	LTE Band 7 : 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					4.51	4.50	9.09	9.05	13.37	13.43	18.22	18.38
Middle CH					4.50	4.51	8.99	8.99	13.43	13.40	18.38	18.30
Highest CH					4.49	4.49	9.11	9.01	13.49	13.43	18.22	18.42
Mode	LTE Band 7 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH					4.49		9.05		13.43		18.38	
Middle CH					4.50		9.01		13.43		18.38	
Highest CH					4.49		9.01		13.46		18.30	

Mode	LTE Band 38 : 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					4.52	4.49	9.05	9.03	13.46	13.43	18.26	18.18
Middle CH					4.51	4.47	9.03	9.01	13.34	13.43	18.22	18.38
Highest CH					4.50	4.51	8.97	8.97	13.40	13.40	18.26	18.50
Mode	LTE Band 38 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH					4.48		9.03		13.37		18.34	
Middle CH					4.48		9.01		13.43		18.18	
Highest CH					4.48		9.05		13.43		18.38	



## For CA

Mode	LTE Band 7 : 99%OBW(MHz)			
QPSK				
BW	10MHz+20MHz	15MHz+5MHz	15MHz+10MHz	15MHz+15MHz
Lowest CH	27.70		23.18	28.47
Middle CH	27.57		23.08	28.65
Highest CH	27.93		23.08	28.35
BW	15MHz+20MHz	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz
Lowest CH	32.59	27.93	32.87	37.72
Middle CH	32.38	28.05	32.59	37.32
Highest CH	32.73	27.75	32.73	37.48

Mode	LTE Band 7 : 99%OBW(MHz)			
16QAM				
BW	10MHz+20MHz	15MHz+5MHz	15MHz+10MHz	15MHz+15MHz
Lowest CH	28.05		23.23	28.71
Middle CH	27.63		23.38	28.35
Highest CH	27.51		23.03	28.47
BW	15MHz+20MHz	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz
Lowest CH	32.73	27.87	32.66	37.40
Middle CH	32.87	27.87	32.52	37.64
Highest CH	32.38	28.17	32.73	37.48

Mode	LTE Band 7 : 99%OBW(MHz)			
64QAM				
BW	10MHz+20MHz	15MHz+5MHz	15MHz+10MHz	15MHz+15MHz
Lowest CH	27.96		23.53	28.59
Middle CH	27.87		23.37	28.65
Highest CH	27.63		23.13	28.31
BW	15MHz+20MHz	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz
Lowest CH	32.52	28.29	32.66	37.64
Middle CH	32.42	28.05	32.94	37.28
Highest CH	32.31	28.23	32.87	37.48



Mode	LTE Band 38 : 99%OBW(MHz)			
Mod.	QPSK		16QAM	
BW	15MHz+15MHz	20MHz+20MHz	15MHz+15MHz	20MHz+20MHz
Lowest CH	28.65	37.48	28.41	37.48
Middle CH	28.71	37.56	28.59	37.80
Highest CH	28.41	37.88	28.47	37.72

Mode	LTE Band 38 : 99%OBW(MHz)			
Mod.	64QAM		-	
BW	15MHz+15MHz	20MHz+20MHz	-	-
Lowest CH	28.59	37.96	-	-
Middle CH	28.35	37.72	-	-
Highest CH	28.17	37.40	-	--