



















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	QPSK	16QAM
Lowest CH	1.09	1.09	2.72	2.73	4.47	4.51	8.99	9.03	13.46	13.37	18.38	18.42		
Middle CH	1.09	1.10	2.72	2.73	4.48	4.49	9.03	9.03	13.40	13.43	18.22	18.42		
Highest CH	1.09	1.09	2.71	2.72	4.49	4.48	9.05	8.99	13.46	13.52	18.34	18.30		
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz			
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM			
Lowest CH	1.10		2.71		4.49		8.97		13.52		18.46			
Middle CH	1.09		2.71		4.50		8.99		13.40		18.26			
Highest CH	1.09		2.72		4.47		9.03		13.43		18.34			

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	QPSK	16QAM
Lowest CH	1.09	1.09	2.72	2.73	4.49	4.49	9.03	8.99	13.40	13.49	18.18	18.34		
Middle CH	1.09	1.09	2.72	2.72	4.49	4.48	9.01	9.05	13.49	13.46	18.34	18.42		
Highest CH	1.09	1.09	2.71	2.73	4.50	4.49	9.03	9.01	13.43	13.40	18.42	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	1.08		2.72		4.50		9.09		13.46		18.42			
Middle CH	1.10		2.73		4.51		9.09		13.46		18.42			
Highest CH	1.09		2.75		4.49		9.03		13.43		18.42			

Mode	LTE Band 5 : 99%OBW(MHz)													
	BW		1.4MHz		3MHz		5MHz		10MHz		1.4MHz	3MHz	5MHz	10MHz
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM	64QAM	64QAM	64QAM	
Lowest CH	1.10	1.09	2.71	2.72	4.49	4.47	9.01	9.01	1.09	2.73	4.50	9.05		
Middle CH	1.08	1.09	2.72	2.71	4.50	4.48	9.01	9.01	1.08	2.73	4.50	9.01		
Highest CH	1.09	1.09	2.71	2.70	4.49	4.50	9.03	9.01	1.09	2.73	4.47	9.07		



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	-	-	-	-	4.49	4.49	9.01	9.03	13.43	13.43	18.34	18.26
Middle CH	-	-	-	-	4.49	4.49	9.05	9.01	13.37	13.52	18.34	18.38
Highest CH	-	-	-	-	4.49	4.48	8.99	8.97	13.40	13.43	18.10	18.22

Mode	LTE Band 7 : 99%OBW(MHz)											
BW	5MHz		10MHz		15MHz		20MHz					
Mod.	64QAM		64QAM		64QAM		64QAM					
Lowest CH	4.50		8.99		13.49		18.26					
Middle CH	4.49		9.03		13.43		18.30					
Highest CH	4.48		8.95		13.46		18.42					

Mode	LTE Band 12 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		1.4MHz	3MHz	5MHz	10MHz
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM	64QAM	64QAM
Lowest CH	1.09	1.08	2.72	2.72	4.50	4.49	9.01	9.03	1.09	2.72	4.50	9.07
Middle CH	1.09	1.09	2.71	2.71	4.49	4.49	9.01	9.03	1.08	2.72	4.49	9.01
Highest CH	1.09	1.09	2.75	2.72	4.52	4.46	9.01	9.05	1.08	2.71	4.50	8.97

Mode	LTE Band 13 : 99%OBW(MHz)											
BW	5MHz		10MHz		5MHz	10MHz						
Mod.	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM						
Lowest CH	4.47	4.50	-	-	4.47	-						
Middle CH	4.47	4.48	9.01	8.93	4.49	8.99						
Highest CH	4.50	4.49	-	-	4.48	-						

Mode	LTE Band 17 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		5MHz	10MHz		
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM		
Lowest CH	-	-	-	-	4.50	4.49	9.07	8.99	4.47	8.97	-	-
Middle CH	-	-	-	-	4.50	4.52	9.01	8.97	4.49	8.99	-	-
Highest CH	-	-	-	-	4.49	4.47	9.01	8.99	4.48	9.03	-	-



Mode	LTE Band 25 : 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	2.70	2.70	4.48	4.51	8.97	8.99	13.43	13.46	18.22	18.10
Middle CH	1.09	1.09	2.71	2.72	4.48	4.47	9.01	9.03	13.37	13.46	18.30	18.38
Highest CH	1.09	1.09	2.72	2.72	4.47	4.51	9.07	9.01	13.43	13.43	18.30	18.38
BW	1.4MHz	3MHz	5MHz	10MHz	15MHz	20MHz						
Mod.	64QAM	64QAM	64QAM	64QAM	64QAM	64QAM						
Lowest CH	1.09	2.72	4.49	9.01	13.34	18.30						
Middle CH	1.09	2.72	4.49	9.03	13.49	18.34						
Highest CH	1.09	2.71	4.47	9.03	13.46	18.42						

Mode	LTE Band 26 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		CH26765	
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM
Lowest CH	1.09	1.09	2.72	2.71	4.49	4.47	9.05	9.03	13.46	13.46	13.40	13.43
Middle CH	1.09	1.09	2.73	2.73	4.50	4.51	9.05	9.03	13.43	13.43	-	-
Highest CH	1.09	1.09	2.71	2.75	4.48	4.50	9.03	8.97	13.46	13.37	-	-
BW	1.4MHz	3MHz	5MHz	10MHz	15MHz	CH26765						
Mod.	64QAM	64QAM	64QAM	64QAM	64QAM	64QAM						
Lowest CH	1.09	2.72	4.51	8.99	13.46	13.46						
Middle CH	1.08	2.73	4.48	9.03	13.46	-						
Highest CH	1.09	2.72	4.50	8.97	13.40	-						

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	-	-	-	-	4.51	4.49	9.03	9.07	13.43	13.46	18.34	18.26
Middle CH	-	-	-	-	4.48	4.50	8.97	9.01	13.40	13.49	18.34	18.30
Highest CH	-	-	-	-	4.49	4.49	9.01	8.95	13.34	13.40	18.26	18.42
Mode	LTE Band 38 : 99%OBW(MHz)											
BW	1.4MHz		3MHz		5MHz		10MHz		15MHz		20MHz	
Mod.	64QAM		64QAM		64QAM		64QAM		64QAM		64QAM	
Lowest CH	-	-	-	-	4.47	-	9.03	-	13.40	-	18.18	-
Middle CH	-	-	-	-	4.50	-	9.03	-	13.43	-	18.34	-
Highest CH	-	-	-	-	4.47	-	9.03	-	13.46	-	18.42	-



Mode	LTE Band 41 : 99%OBW(MHz)											
BW	5MHz		10MHz		15MHz		20MHz		5MHz	10MHz	15MHz	20MHz
Mod.	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	QPSK	16QAM	64QAM	64QAM	64QAM	64QAM
Lowest CH	4.50	4.51	8.97	8.97	13.43	13.43	18.38	18.18	4.50	8.99	13.37	18.26
Middle CH	4.49	4.50	9.09	9.01	13.40	13.46	18.38	18.02	4.50	9.03	13.43	18.34
Highest CH	4.49	4.49	9.13	9.03	13.49	13.43	18.14	18.26	4.48	9.05	13.40	18.38



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Mode	LTE Band 7 : 99%OBW(MHz)			
QPSK				
BW	10MHz+20MHz	15MHz+5MHz	15MHz+10MHz	15MHz+15MHz
Lowest CH	27.93	-	23.28	28.65
Middle CH	28.11	-	23.53	28.59
Highest CH	28.05	-	23.38	28.53
BW	15MHz+20MHz	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz
Lowest CH	32.59	27.87	32.66	37.48
Middle CH	32.80	28.11	32.94	37.56
Highest CH	32.73	27.81	32.73	37.56

Mode	LTE Band 7 : 99%OBW(MHz)			
16QAM				
BW	10MHz+20MHz	15MHz+5MHz	15MHz+10MHz	15MHz+15MHz
Lowest CH	27.87	-	23.38	28.47
Middle CH	27.87	-	23.58	28.59
Highest CH	27.87	-	23.38	28.53
BW	15MHz+20MHz	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz
Lowest CH	32.73	27.93	32.73	37.48
Middle CH	32.87	28.05	32.87	37.80
Highest CH	32.73	27.93	32.73	37.64

Mode	LTE Band 7 : 99%OBW(MHz)			
64QAM				
BW	10MHz+20MHz	15MHz+5MHz	15MHz+10MHz	15MHz+15MHz
Lowest CH	27.81	-	23.38	28.41
Middle CH	27.81	-	23.53	28.59
Highest CH	27.93	-	23.23	28.47
BW	15MHz+20MHz	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz
Lowest CH	32.52	27.99	32.52	37.40
Middle CH	32.80	28.05	32.80	37.64
Highest CH	32.73	27.93	32.80	37.56



Mode	LTE Band 38 : 99%OBW(MHz)			
Mod.	QPSK		16QAM	
BW	15MHz+15MHz	20MHz+20MHz	15MHz+15MHz	20MHz+20MHz
Lowest CH	28.53	37.72	28.53	37.80
Middle CH	28.59	37.72	28.71	37.48
Highest CH	28.53	37.64	28.59	37.64
Mod.	64QAM		-	
BW	15MHz+15MHz	20MHz+20MHz	-	-
Lowest CH	28.47	37.64	-	-
Middle CH	28.59	37.64	-	-
Highest CH	28.53	37.56	-	-



Mode	LTE Band 41 : 99%OBW(MHz)				
QPSK					
BW	5MHz+20MHz	10MHz+15MHz	10MHz+20MHz	15MHz+10MHz	15MHz+15MHz
Lowest CH	23.18	23.43	27.93	23.48	28.47
Middle CH	23.23	23.53	27.75	23.48	28.53
Highest CH	23.23	23.43	27.99	23.48	28.59
BW	15MHz+20MHz	20MHz+5MHz	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz
Lowest CH	32.73	23.23	27.99	32.59	37.56
Middle CH	32.80	23.23	28.05	32.80	37.64
Highest CH	32.94	23.23	28.05	32.94	37.64

Mode	LTE Band 41 : 99%OBW(MHz)				
16QAM					
BW	5MHz+20MHz	10MHz+15MHz	10MHz+20MHz	15MHz+10MHz	15MHz+15MHz
Lowest CH	23.33	23.38	28.05	23.43	28.47
Middle CH	23.18	23.48	27.87	23.48	28.59
Highest CH	23.18	23.38	27.99	23.38	28.47
BW	15MHz+20MHz	20MHz+5MHz	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz
Lowest CH	32.80	23.23	28.05	32.66	37.48
Middle CH	32.80	23.28	28.11	32.80	37.72
Highest CH	32.87	23.33	27.99	32.73	37.64

Mode	LTE Band 41 : 99%OBW(MHz)				
64QAM					
BW	5MHz+20MHz	10MHz+15MHz	10MHz+20MHz	15MHz+10MHz	15MHz+15MHz
Lowest CH	23.28	23.43	27.99	23.53	28.41
Middle CH	23.23	23.38	27.99	23.53	28.53
Highest CH	23.28	23.43	27.99	23.43	28.41
BW	15MHz+20MHz	20MHz+5MHz	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz
Lowest CH	32.73	23.23	27.93	32.80	37.56
Middle CH	32.66	23.28	27.99	32.73	37.64
Highest CH	32.73	23.28	28.05	32.80	37.64













