



	2593	21.96	21.02	19.84
	2549.5	21.90	20.97	19.77
	2506	22.02	21.12	19.51
	2680	21.95	21.10	20.11
50RB	2636.5	21.96	21.16	19.99
Middle (25)	2593	21.93	20.98	19.88
ivildule (25)	2549.5	21.98	21.06	19.93
	2506	21.99	21.10	19.50
	2680	22.02	21.18	20.21
5000	2636.5	22.04	21.25	20.07
50RB	2593	22.04	21.09	20.00
Low (0)	2549.5	21.91	21.06	19.81
	2506	22.13	21.20	19.55
	2680	21.99	21.05	20.12
40000	2636.5	21.92	21.10	19.99
100RB	2593	21.92	21.01	19.87
(0)	2549.5	21.95	21.03	19.89
	2506	22.03	21.05	19.51



		E	Band 4		
Dec 1 1 1 1 1 1	RB allocation	F	QPSK	16QAM	64QAM
Bandwidth (MHz)	RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)	Actual output power (dBm)	Actual output power (dBm)
	,	1754.3	22.79	21.75	21.89
	1RB	1732.5	23.04	22.08	21.86
	High (5)	1710.7	22.84	22.32	21.97
		1754.3	22.83	21.87	22.00
	1RB	1732.5	23.10	22.16	21.95
	Middle (3)	1710.7	22.92	22.36	21.95
		1754.3	22.77	21.83	21.98
	1RB	1732.5	23.08	22.07	21.95
	Low (0)	1710.7	22.75	22.30	21.97
		1754.3	22.74	22.01	21.82
1.4 MHz	3RB	1732.5	23.01	22.14	21.97
	High (3)	1710.7	22.85	22.11	21.96
		1754.3	22.84	22.06	21.98
	3RB	1732.5	23.04	22.18	21.90
	Middle (1)	1710.7	22.89	22.21	21.99
		1754.3	22.71	22.04	21.97
	3RB	1732.5	22.96	22.09	21.99
	Low (0)	1710.7	22.86	22.10	21.94
	6RB (0)	1754.3	21.83	21.05	20.95
		1732.5	21.99	21.22	20.98
		1710.7	21.68	20.75	20.95
	1RB High (14)	1753.5	22.91	22.18	21.79
		1732.5	23.01	22.02	21.91
		1711.5	22.87	21.85	22.00
		1753.5	23.03	22.35	21.96
	1RB	1732.5	23.15	22.15	21.92
	Middle (7)	1711.5	22.97	22.01	21.98
		1753.5	22.87	22.22	21.98
	1RB	1732.5	23.06	22.08	21.96
	Low (0)	1711.5	22.84	21.88	21.94
		1753.5	21.92	20.97	20.83
3 MHz	8RB	1732.5	22.07	21.14	21.00
3 WII 12	High (7)	1711.5	21.76	21.12	20.98
		1753.5	21.95	21.04	20.98
	8RB	1733.5	22.13	21.19	21.00
	Middle (4)	1711.5	21.84	21.14	20.93
		1711.5	21.92	21.14	20.99
	8RB	1733.5	22.09	21.16	20.98
	Low (0)	1732.5	21.80	21.17	20.95
		1711.5	21.90	20.96	20.95
	15RB	1733.5		20.96	20.95
	(0)		22.09		
		1711.5	21.79	21.01	20.90
E MI !-	1RB	1752.5	22.91	21.96	21.80
5 MHz	High (24)	1732.5	23.11	22.20	21.94
		1712.5	22.85	22.46	21.95

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		4750.5	00.00	04.00	04.00
	1RB	1752.5	22.93	21.98	21.98
	Middle (12)	1732.5	23.18	22.20	21.92
		1712.5	22.85	22.49	21.92
		1752.5	22.89	22.00	21.97
	Low (0)	1732.5	23.18	22.19	21.99
	12RB High (13)	1712.5	22.82	22.48	21.99
		1752.5	21.90	20.98	20.78
		1732.5	22.04	21.19	20.98
		1712.5	21.84	21.08	21.00
	12RB	1752.5	21.95	21.06	20.96
	Middle (6)	1732.5	22.10	21.24	20.95
	. ,	1712.5	21.83	21.22	20.92
	12RB	1752.5	21.93	21.05	20.97
	Low (0)	1732.5	22.06	21.18	20.95
	()	1712.5	21.84	21.11	20.97
	25RB	1752.5	21.87	20.93	20.95
	(0)	1732.5	22.07	21.15	21.00
	(-)	1712.5	21.84	21.07	20.87
	1RB	1750	22.82	21.80	21.87
	High (49)	1732.5	23.04	21.98	21.85
	1 light (10)	1715	22.96	22.40	21.93
	1RB Middle (24)	1750	22.82	21.95	21.95
		1732.5	23.03	21.97	21.95
		1715	22.92	22.37	21.94
	1RB Low (0)	1750	22.81	21.99	21.99
		1732.5	23.03	21.94	21.95
		1715	22.90	22.33	21.96
	0577	1750	21.84	21.01	20.82
10 MHz	25RB	1732.5	22.09	21.18	20.96
	High (25)	1715	21.98	21.16	21.00
	0.5.5.5	1750	21.90	21.10	20.99
	25RB	1732.5	22.13	21.20	20.98
	Middle (12)	1715	22.02	21.23	20.91
		1750	21.92	21.05	20.97
	25RB	1732.5	22.07	21.12	21.00
	Low (0)	1715	21.91	21.13	20.98
		1750	21.86	21.05	20.94
	50RB	1732.5	22.08	21.14	20.95
	(0)	1715	21.99	21.19	20.94
		1747.5	22.90	22.16	21.85
	1RB	1747.5	22.90	21.95	
	High (74)			+	21.96
		1717.5	22.90	22.29	22.00
4 F B 41 1	1RB	1747.5	22.90	22.33	22.00
15 MHz	Middle (37)	1732.5	22.99	21.95	21.95
		1717.5	22.96	22.43	21.98
	1RB	1747.5	22.98	22.45	21.99
	Low (0)	1732.5	23.02	21.88	21.94
	, ,	1717.5	22.86	22.32	21.97



	2000	1747.5	21.89	20.96	20.79
	36RB High (38) - 36RB Middle (19) -	1732.5	22.03	21.16	20.97
		1717.5	22.02	21.13	20.96
		1747.5	21.89	21.01	20.96
		1732.5	22.12	21.18	20.99
		1717.5	22.03	21.14	20.90
	0000	1747.5	21.95	21.09	20.94
	36RB Low (0)	1732.5	22.05	21.14	20.98
	LOW (0)	1717.5	21.96	21.13	20.99
	7500	1747.5	21.96	21.14	20.96
	75RB	1732.5	22.04	21.14	21.00
	(0)	1717.5	22.00	21.14	20.89
	455	1745	22.86	22.22	21.86
	1RB	1732.5	22.98	22.42	21.92
	High (99)	1720	23.01	22.46	22.00
	1RB Middle (50)	1745	22.84	22.40	21.97
		1732.5	22.99	22.40	21.94
		1720	22.93	22.45	22.00
	1RB Low (0)	1745	22.89	22.42	21.94
		1732.5	22.90	22.26	21.95
		1720	22.81	22.44	21.97
	5000	1745	21.89	21.03	20.84
20 MHz	50RB	1732.5	22.06	21.20	21.00
	High (50)	1720	22.10	21.21	21.00
	50DD	1745	22.06	21.17	20.93
	50RB Middle (25)	1732.5	22.13	21.18	20.92
	ivilidate (23)	1720	22.02	21.14	20.95
	EODD.	1745	22.07	21.16	20.94
	50RB Low (0)	1732.5	22.09	21.10	20.96
	LOW (O)	1720	22.00	21.16	20.93
	40000	1745	22.00	21.17	20.95
	100RB (0)	1732.5	22.05	21.13	20.94
	(0)	1720	21.98	21.11	20.93

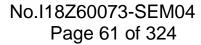


		B	and 26		
Bandwidth	RB allocation	Frequency	QPSK	16QAM	64QAM
(MHz)	RB offset	(MHz)	Actual output	Actual output	Actual outpu
	(Start RB)	848.3	power (dBm) 22.35	power (dBm) 21.83	power (dBm 20.06
	1RB				
	High (5)	831.5	23.00	22.14 22.24	21.30
		814.7	23.15		21.21
	1RB	848.3	22.31	21.78	21.36
	Middle (3)	831.5	23.10	22.16	21.25
		814.7	23.21	22.31	21.27
	1RB	848.3	22.33	21.81	21.32
	Low (0)	831.5	23.02	22.08	21.32
		814.7	23.17	22.33	21.34
	3RB	848.3	22.17	21.50	20.05
1.4 MHz	High (3)	831.5	23.06	22.27	20.14
	O ()	814.7	23.15	22.30	20.35
	3RB	848.3	22.20	21.57	20.16
	Middle (1)	831.5	23.07	22.34	20.26
	,	814.7	23.24	22.36	20.32
	3RB	848.3	22.17	21.56	20.22
	Low (0)	831.5	23.05	22.29	20.20
	2011 (0)	814.7	23.15	22.33	20.27
	6RB (0)	848.3	21.80	20.81	20.07
		831.5	21.97	21.24	20.15
		814.7	22.15	21.38	20.20
	1RB High (14)	847.5	22.45	21.90	20.08
		831.5	23.04	22.19	21.23
		815.5	23.06	22.14	21.19
	400	847.5	22.52	22.02	21.32
	1RB	831.5	23.14	22.29	21.23
	Middle (7)	815.5	23.15	21.33	21.24
	455	847.5	22.92	22.35	21.31
	1RB	831.5	23.08	22.23	21.31
	Low (0)	815.5	23.08	22.18	21.31
	200	847.5	21.88	21.06	20.06
3 MHz	8RB	831.5	22.05	21.21	20.09
	High (7)	815.5	22.02	21.21	20.32
		847.5	21.94	21.14	20.16
	8RB	831.5	22.12	21.23	20.26
	Middle (4)	815.5	22.13	21.23	20.31
		847.5	21.92	21.07	20.19
	8RB	831.5	22.10	21.19	20.21
	Low (0)	815.5	22.08	21.20	20.19
		847.5	21.93	21.06	20.14
	15RB	831.5	22.07	21.15	20.19
	(0)	815.5	22.10	21.15	20.23
		846.5	22.98	21.79	20.07
5 MHz	1RB	831.5	23.02	22.44	21.26
5 MHz	High (24)				

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		Q16 F	22 NE	21.00	21.36
	1RB Middle (12)	846.5 831.5	23.05	21.98 22.50	21.36
		816.5	23.06	22.50	21.17
		846.5	23.10	22.44	21.24
				+	
	Low (0)	831.5	23.07	22.48	21.31
	12RB High (13)	816.5	23.11 21.92	22.42 21.07	21.38
		846.5			20.04
		831.5	22.07	21.29	20.11
		816.5	22.26	21.36	20.33
	12RB	846.5	21.99	21.15	20.15
	Middle (6)	831.5	22.14	21.33	20.29
		816.5	22.29	21.44	20.33
	12RB	846.5	22.00	21.15	20.19
	Low (0)	831.5	22.10	21.37	20.18
		816.5	22.27	21.38	20.25
	25RB	846.5	21.97	21.07	20.11
	(0)	831.5	22.10	21.26	20.19
	()	816.5	22.29	21.23	20.25
	1RB	844	22.17	21.91	20.11
	High (49)	831.5	23.05	22.46	21.20
		820	23.23	22.33	21.27
	400	844	22.92	21.95	21.40
	1RB Middle (24)	831.5	23.09	22.44	21.18
	iviluale (24)	820	23.20	22.30	21.28
	1RB Low (0)	844	22.92	21.98	21.30
		831.5	23.13	22.45	21.34
		820	23.20	22.32	21.36
	0500	844	21.93	21.06	20.03
10 MHz	25RB	831.5	22.06	21.23	20.15
	High (25)	820	22.34	21.42	20.31
	0EDD	844	21.99	21.10	20.11
	25RB	831.5	22.16	21.25	20.23
	Middle (12)	820	22.27	21.46	20.34
	6-5-	844	21.96	21.09	20.18
	25RB	831.5	22.09	21.24	20.23
	Low (0)	820	22.22	21.40	20.24
		844	22.01	21.11	20.13
	50RB	831.5	22.08	21.18	20.14
	(0)	820	22.35	21.49	20.26
	+	841.5	22.77	21.11	20.08
	1RB	831.5	22.77	21.11	21.27
	High (74)	822.5	23.12	21.97	21.27
				+	
1 E N 11 !-	1RB	841.5	23.01	22.45	21.39
15 MHz	Middle (37)	831.5	23.03	22.06	21.22
		822.5	23.08	22.42	21.28
	1RB	841.5	23.03	22.42	21.34
	Low (0)	831.5	23.15	22.08	21.37
	2011 (0)	822.5	23.18	22.45	21.38





	OCDD	841.5	21.92	20.98	20.08
	36RB High (38)	831.5	22.04	21.14	20.14
	Tilgit (36)	822.5	22.15	21.25	20.31
	OCDD	841.5	21.96	21.05	20.17
	36RB Middle (19)	831.5	22.09	21.19	20.26
	ivildule (19)	822.5	22.23	21.34	20.36
	0000	841.5	22.01	21.02	20.24
	36RB Low (0)	831.5	22.09	21.18	20.24
	LOW (0)	822.5	22.14	21.25	20.25
	75RB (0)	841.5	21.98	21.00	20.14
		831.5	22.07	21.14	20.19
		822.5	22.18	21.27	20.25



Low power

Table 11.3-2: The conducted Power for LTE

Bandwidth (MHz) RB allocation RB offset (Start RB) 1909.3 20.98 21.12 1880 21.31 21.45 1850.7 21.28 21.67 21.05 21.17 21.49 21	
(MHz) RB offset (Start RB) (MHz) Actual output power (dBm) power (64QAM
1.4 MHz Start RB 1909.3 20.98 21.12	ut Actual outpu
1RB High (5) 1880 21.31 21.45 1880 21.28 21.67 1RB Middle (3) 1880 21.40 21.49 1880 21.40 21.49 1880 21.31 21.49 1880 21.40 21.49 1880 21.35 21.72 1880 21.35 21.08 1880 21.35 21.11 1880 21.35 21.41 1880 21.35 21.41 1880 21.35 21.41 1880 21.35 21.41 1880 21.32 21.68 1909.3 21.04 21.27 1880 21.32 21.42 1880 21.32 21.42 1880 21.32 21.42 1880 21.32 21.42 1880 21.33 21.04 21.27 1880 21.32 21.50 1880 21.33 21.62 1880 21.39 21.62 1880 21.39 21.62 1880 21.33 21.43 1850.7 21.36 21.36 1880 21.31 21.48 1909.3 21.05 1880 21.31 21.48 1909.3 21.05 21.28 1880 21.31 21.48 1909.3 21.05 21.28 1880 21.31 21.48 1908.5 21.24 21.20 1880 21.31 21.48 1908.5 21.31 21.48 1908.5 21.40 1880 21.35 21.21 1880 21.22 21.20 1880 21.35 21.23 1851.5 21.30 21.69 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24	n) power (dBm)
High (5)	21.12
1RB Middle (3) 1RB Middle (3) 1RB Middle (3) 1RB Low (0) 1RB Low (0) 1RB High (3) 1RB High (14) 1RB Low (0) 1RB High (14) 1RB Low (0) 1RB High (14) 1RB Low (0) 1RB High (17) 1RB High (7) 1RB High (7	21.41
1.4 MHz 1.8 Middle (3) 1850.7 21.36 21.72 1880 1850.7 21.36 21.72 1880 20.97 21.08 1880 21.35 21.41 1850.7 21.29 21.68 1890 1850.7 21.29 21.68 1890 21.32 21.42 1850.7 21.32 21.50 1850.7 21.32 21.50 1880 21.32 21.50 1880 21.32 21.50 1880 21.33 21.06 21.32 1850.7 21.39 21.52 1850.7 21.39 21.62 1850.7 21.39 21.62 1850.7 21.39 21.62 1850.7 21.39 21.62 1850.7 21.39 21.62 1850.7 21.39 21.62 1850.7 21.39 21.62 1850.7 21.39 21.62 1850.7 21.39 21.62 1880 21.33 21.43 1850.7 21.36 21.26 1880 21.31 21.48 (0) 1850.7 21.24 21.20 1880 21.31 21.48 High (14) 1880 21.35 21.21 1880 21.35 21.21 1880 21.35 21.21 1880 21.35 21.21 1880 21.35 21.23 1880 21.35 21.21 1880 21.35 21.21 1880 21.42 21.40 1851.5 21.45 21.84 1908.5 21.04 21.17 1RB Low (0) 1880 21.25 21.24 21.40 1880 21.25 21.24 21.40 1880 21.25 21.24 21.40 1880 21.25 21.24 21.40 1880 21.25 21.20 3 MHz 8RB High (7) High (7) 1880 21.37 21.51	21.48
Middle (3)	21.12
1.4 MHz 1	21.46
1.4 MHz 1.4 MHz 1.4 MHz 1.5	21.48
1.4 MHz Low (0)	21.33
1.4 MHz 1850.7 21.29 21.68	21.45
1.4 MHz	21.51
High (3) High (3) 1880 21.32 21.42 1850.7 21.32 21.50 3RB Middle (1) 1880 21.32 21.50 21.32 21.50 1909.3 21.06 21.32 1880 21.39 21.62 1880 21.39 21.62 1909.3 21.02 21.26 1880 21.33 21.43 1880 21.33 21.43 1880 21.33 21.43 1880 21.33 21.43 1880 21.31 21.48 1909.3 21.05 21.28 1880 21.31 21.48 1880 21.31 21.48 1908.5 20.98 21.12 1RB High (14) 1880 21.35 21.23 1880 21.31 21.72 1908.5 21.31 21.72 1908.5 21.31 21.72 1908.5 21.40 1880 21.42 21.40 1880 21.42 21.40 1880 21.25 21.84 1908.5 21.04 21.17 1880 21.25 21.24 1908.5 21.26 1880 21.25 21.26 21.20 21.26 2	21.16
3RB Middle (1)	21.44
3RB Middle (1) 1880 21.39 21.52 3RB Low (0) 1909.3 21.02 21.26 1880 21.33 21.43 1880 21.33 21.43 1850.7 21.36 21.54 1909.3 21.05 21.28 1880 21.31 21.48 1850.7 21.24 21.20 1850.7 21.24 21.20 1880 21.31 21.42 1880 21.35 21.23 1851.5 21.31 21.72 1RB Middle (7) 1880 21.42 21.40 1880 21.42 21.40 1880 21.25 21.24 1880 21.25 21.24 1851.5 21.30 21.69 1851.5 21.30 21.69 3 MHz 1908.5 21.06 21.20 1880 21.37 21.51	21.42
Middle (1) 1880	21.14
1850.7 21.39 21.62 3RB Low (0) 1909.3 21.02 21.26 1880 21.33 21.43 1850.7 21.36 21.54 1890.3 21.05 21.28 1880 21.31 21.48 1909.3 21.05 21.28 1880 21.31 21.48 1850.7 21.24 21.20 1850.7 21.24 21.20 1880 21.35 21.31 21.72 1880 21.35 21.31 21.72 1880 21.35 21.31 21.72 1908.5 21.31 21.72 1908.5 21.10 21.27 1880 21.42 21.40 1851.5 21.45 21.84 1908.5 21.04 21.17 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24	21.45
3RB Low (0) 1880 21.33 21.43 1850.7 21.36 21.54 1909.3 21.05 21.28 1880 21.31 21.48 1880 21.31 21.48 1880 21.31 21.48 1880 21.31 21.48 1908.5 20.98 21.12 1880 21.35 21.23 1880 21.35 21.23 1880 21.35 21.23 1880 21.35 21.23 1880 21.42 21.40 1880 21.42 21.40 1880 21.42 21.40 1880 21.45 21.84 1908.5 21.04 21.17 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.269 1888 1908.5 21.06 21.20 21.20	21.42
Low (0)	21.32
1850.7 21.36 21.54 6RB 1909.3 21.05 21.28 1880 21.31 21.48 1850.7 21.24 21.20 1850.7 21.24 21.20 1880 21.35 21.32 1880 21.35 21.33 1851.5 21.31 21.72 1RB 1880 21.35 21.23 1851.5 21.31 21.72 1880 21.42 21.40 1851.5 21.45 21.40 1851.5 21.45 21.84 1908.5 21.04 21.17 1RB 1880 21.25 21.24 1908.5 21.04 21.17 1RB 1880 21.25 21.24 1908.5 21.04 21.17 1851.5 21.30 21.69 1800 21.25 21.24 1908.5 21.06 21.20 1800 21.37 21.51	21.45
6RB (0)	21.52
1880 21.31 21.48 1850.7 21.24 21.20 1850.7 21.24 21.20 1880 21.35 20.98 21.12 1880 21.35 21.23 1851.5 21.31 21.72 1880 21.42 21.40 1880 21.42 21.40 1851.5 21.45 21.84 1908.5 21.04 21.17 1RB Low (0) 1851.5 21.30 21.69 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24 1880 21.25 21.24	20.21
1RB High (14) 1RB Middle (7) 1RB Low (0) 1850.7 21.24 21.20 21.21 1908.5 20.98 21.12 21.23 21.23 21.23 21.23 21.23 21.23 21.24 21.20 21.27 21.24 21.20 21.27 21.24 21.24 21.20 21.27 21.24 21.20 21.27 21.24 21.20 21.27 21.24 21.20 21.27 21.24 21.20 21.25 21.24 21.26 21.26 21.26 21.27 21.26 21.26 21.26 21.20 21.20 21.20	20.36
1RB High (14) 1880 21.35 21.23 1851.5 21.31 21.72 1RB Middle (7) 1880 21.35 21.31 21.72 1908.5 21.10 21.27 1880 21.42 21.40 1851.5 21.45 21.84 1908.5 21.04 21.17 1880 21.25 21.24 1880 21.25 21.24 1890 21.25 21.24 1908.5 21.06 21.20 1880 21.25 21.20	20.24
1RB High (14) 1880 21.35 21.23 1851.5 21.31 21.72 1908.5 21.10 21.27 1880 21.42 21.40 1851.5 21.45 21.84 1908.5 21.04 21.17 1880 21.25 21.24 1908.5 21.04 21.17 1880 21.25 21.24 1851.5 21.30 21.69 1908.5 21.06 21.20 1880 21.37 21.51	21.17
High (14) 1851.5 21.31 21.72 1RB Middle (7) 1880 21.42 21.40 1851.5 21.45 21.84 1908.5 21.04 21.17 1RB Low (0) 1880 21.25 21.24 1908.5 21.04 21.17 1880 21.25 21.24 1851.5 21.30 21.69 1908.5 21.06 21.20 1888 1908.5 21.06 21.20 21.20	21.39
1RB Middle (7) 1880 21.42 21.40 1851.5 21.45 21.84 1908.5 21.04 21.17 1880 21.25 21.24 1880 21.25 21.24 1851.5 21.30 21.69 1908.5 21.06 21.20 1880 21.37 21.51	21.48
1RB Middle (7) 1880 21.42 21.40 1851.5 21.45 21.84 1908.5 21.04 21.17 1880 21.25 21.24 1851.5 21.30 21.69 1908.5 21.06 21.20 1880 21.37 21.51	21.15
1RB Low (0) 1851.5 21.45 21.84 1908.5 21.04 21.17 1880 21.25 21.24 1851.5 21.30 21.69 1908.5 21.06 21.20 1860 21.37 21.51	21.35
1RB Low (0) 1880 21.25 21.24 1851.5 21.30 21.69 1908.5 21.06 21.20 3 MHz 8RB High (7) 1880 21.37 21.51	21.44
1RB Low (0) 1880 21.25 21.24 1851.5 21.30 21.69 1908.5 21.06 21.20 1880 21.37 21.51	21.29
3 MHz 8RB High (7) 1851.5 21.30 21.69 21.20 21.51	21.39
3 MHz 8RB High (7) 1908.5 21.06 21.20 1880 21.37 21.51	21.50
3 MHz 8RB High (7) 1880 21.37 21.51	20.09
High (7)	20.31
	20.35
1908.5 21.16 21.27	20.06
8RB 1880 21.41 21.54	20.39
Middle (4) 1851.5 21.40 21.51	20.47
1908 5 21 08 21 21	20.25
8RB 1880 21.37 21.55	20.28
Low (0) 1851.5 21.33 21.48	20.38
1908.5 21.10 21.15	20.16
15RB 1880 21.35 21.46	20.30
(0) 1851.5 21.33 21.41	20.31



		1907.5	21.09	21.23	21.06
	1RB	1880	21.43	21.58	21.36
	High (24)	1852.5	21.32	21.69	21.47
		1907.5	21.14	21.27	21.12
	1RB	1880	21.46	21.58	21.42
	Middle (12)	1852.5	21.37	21.72	21.48
		1907.5	21.09	21.21	21.26
	1RB	1880	21.41	21.53	21.38
	Low (0)	1852.5	21.27	21.68	21.45
		1907.5	21.07	21.20	20.11
5 MHz	12RB	1880	21.37	21.49	20.34
0 1111 12	High (13)	1852.5	21.33	21.55	20.30
		1907.5	21.17	21.28	20.07
	12RB	1880	21.42	21.53	20.32
	Middle (6)	1852.5	21.37	21.56	20.38
		1907.5	21.13	21.29	20.22
	12RB	1880	21.37	21.52	20.35
	Low (0)	1852.5	21.37	21.55	20.43
		1907.5	21.10	21.12	20.12
	25RB	1880	21.38	21.46	20.33
	(0)	1852.5	21.37	21.50	20.28
	1RB High (49)	1905	21.05	21.12	21.14
		1880	21.43	21.36	21.36
		1855	21.41	21.85	21.43
	1RB	1905	21.05	21.17	21.11
		1880	21.38	21.32	21.37
	Middle (24)	1855	21.36	21.81	21.48
		1905	21.07	21.15	21.33
	1RB	1880	21.42	21.13	21.39
	Low (0)	1855	21.43	21.79	21.43
		1905	21.43	21.79	20.11
40 MH I=	25RB	1880	21.39		20.11
10 MHz	High (25)	1855	21.39	21.41 21.47	20.29
		1905	21.17	21.47	20.35
	25RB	1880	21.17	21.49	20.09
	Middle (12)	1855	21.45	21.49	20.41
		1905	21.43	21.50	20.38
	25RB	1880			
	Low (0)	1855	21.36 21.36	21.40 21.43	20.32
		1905	21.10	21.43	20.35
	50RB	1880	21.38	21.44	20.15
	(0)				
		1855	21.36	21.43	20.26
	1RB	1902.5	21.08	21.47	21.11
	High (74)	1880	21.27	21.32	21.47
15 MHz	g., (, ,)	1857.5	21.31	21.72	21.49
10 1411 12	1RB	1902.5	21.15	21.50	21.12
	Middle (37)	1880	21.34	21.33	21.41
	iviluale (37)	1857.5	21.34	21.78	21.50



	1RB	1902.5	21.12	21.56	21.29
	1RB Low (0) 36RB High (38)	1880	21.30	21.24	21.45
		1857.5	21.30	21.69	21.52
		1902.5	21.10	21.18	20.12
		1880	21.41	21.49	20.36
	1 ligi1 (30)	1857.5	21.35	21.46	20.32
	36RB	1902.5	21.15	21.19	20.09
	Middle (19)	1880	21.44	21.50	20.37
	Middle (13)	1857.5	21.36	21.50	20.43
	OCDD	1902.5	21.09	21.22	20.20
	36RB Low (0)	1880	21.38	21.46	20.39
	LOW (O)	1857.5	21.28	21.48	20.36
	7500	1902.5	21.10	21.21	20.16
	75RB (0)	1880	21.36	21.46	20.35
	(0)	1857.5	21.28	21.48	20.29
	400	1900	21.03	21.33	21.13
	1RB High (99)	1880	21.41	21.61	21.43
		1860	21.22	21.50	21.45
	1RB Middle (50)	1900	21.10	21.36	21.15
		1880	21.36	21.51	21.42
		1860	21.21	21.43	21.50
	1RB Low (0)	1900	21.16	21.47	21.32
		1880	21.33	21.71	21.45
	LOW (O)	1860	21.19	21.57	21.48
		1900	21.17	21.25	20.08
20 MHz	50RB High (50)	1880	21.39	21.46	20.34
	1 light (30)	1860	21.35	21.47	20.35
	FODD	1900	21.22	21.26	20.11
	50RB Middle (25)	1880	21.41	21.47	20.39
	Middle (23)	1860	21.36	21.51	20.44
	FORR	1900	21.28	21.34	20.22
	50RB Low (0)	1880	21.35	21.42	20.35
	LOW (U)	1860	21.31	21.43	20.40
	40000	1900	21.24	21.33	20.19
	100RB	1880	21.36	21.42	20.32
	(0)	1860	21.31	21.45	20.28



		I	Band 7		
Bandwidth	RB allocation	Frequency	QPSK	16QAM	64QAM
(MHz)	RB offset (Start RB)	(MHz)	Actual output power (dBm)	Actual output power (dBm)	Actual outpu power (dBm)
	400	2567.5	19.01	19.12	19.29
	1RB High (24)	2535	19.07	19.23	19.34
	Figit (24)	2502.5	18.95	19.36	19.20
	155	2567.5	18.96	19.11	19.27
	1RB	2535	18.97	19.17	19.28
	Middle (12)	2502.5	18.92	19.38	19.09
	400	2567.5	18.95	19.08	19.33
	1RB	2535	18.99	19.13	19.38
	Low (0)	2502.5	18.91	19.32	19.26
		2567.5	18.98	19.11	19.24
5 MHz	12RB	2535	18.99	19.19	19.23
	High (13)	2502.5	18.93	19.19	19.05
	4000	2567.5	19.00	19.11	19.29
	12RB	2535	19.00	19.20	19.21
	Middle (6)	2502.5	19.00	19.24	18.96
		2567.5	18.98	19.07	19.16
	12RB	2535	18.95	19.18	19.16
	Low (0)	2502.5	18.97	19.22	18.97
	25RB (0)	2567.5	19.01	18.99	19.17
		2535	18.99	19.13	19.17
		2502.5	18.97	19.12	19.05
	1RB	2565	18.92	19.03	19.26
		2535	19.06	19.08	19.34
	High (49)	2505	18.90	19.28	19.15
		2565	18.92	19.03	19.33
	1RB	2535	18.92	18.96	19.35
	Middle (24)	2505	18.95	19.22	19.06
		2565	18.99	19.12	19.34
	1RB	2535	18.90	18.93	19.36
	Low (0)	2505	18.98	19.37	19.25
		2565	18.99	19.19	19.20
10 MHz	25RB	2535	19.08	19.21	19.23
I O IVII IZ	High (25)	2505	18.93	19.07	19.02
		2565	18.98	19.19	19.24
	25RB	2535	19.08	19.20	19.21
	Middle (12)	2505	19.06	19.18	18.98
		2565	19.02	19.18	19.25
	25RB	2535	19.02	19.12	19.12
	Low (0)	2505	19.03	19.10	18.96
		2565	19.07	19.19	19.18
	50RB	2535	19.05	19.14	19.13
	(0)	2505	18.90	19.05	18.97
	1RB	2562.5	19.04	19.39	19.21
15 MHz	High (74)	2535	18.93	19.03	19.38



		2507.5	18.93	19.30	19.19
	400	2562.5	18.99	19.32	19.26
	1RB Middle (37) 1RB Low (0)	2535	18.92	19.03	19.30
		2507.5	19.02	19.42	19.09
		2562.5	19.02	19.38	19.34
		2535	18.91	18.94	19.31
	LOW (U)	2507.5	19.01	19.42	19.26
	0000	2562.5	19.00	19.03	19.23
	36RB	2535	19.07	19.20	19.26
	High (38)	2507.5	18.93	19.07	18.96
	0000	2562.5	19.09	19.14	19.26
	36RB	2535	19.04	19.16	19.18
	Middle (19)	2507.5	18.91	19.11	18.97
	0077	2562.5	19.02	19.07	19.23
	36RB	2535	19.01	19.11	19.08
	Low (0)	2507.5	18.97	19.16	18.91
	7500	2562.5	19.02	19.17	19.17
	75RB	2535	18.99	19.10	19.13
	(0)	2507.5	18.89	19.03	19.00
	400	2560	18.99	19.37	19.26
	1RB	2535	19.02	19.38	19.35
	High (99)	2510	18.99	19.27	19.18
	1RB	2560	19.04	19.38	19.32
		2535	19.01	19.38	19.33
	Middle (50)	2510	18.90	19.28	19.09
	400	2560	18.94	19.25	19.38
	1RB	2535	19.03	19.29	19.35
	Low (0)	2510	18.96	19.33	19.25
	5000	2560	19.12	19.20	19.23
20 MHz	50RB	2535	19.14	19.20	19.25
	High (50)	2510	19.00	19.14	19.02
	5000	2560	19.06	19.15	19.26
	50RB	2535	19.06	19.14	19.20
	Middle (25)	2510	18.94	19.09	18.98
	5000	2560	19.04	19.15	19.22
	50RB	2535	19.03	19.10	19.14
	Low (0)	2510	18.93	19.08	18.96
	40000	2560	19.03	19.11	19.23
	100RB	2535	19.04	19.18	19.19
	(0)	2510	18.95	19.12	19.02
•	1			I	



		B	Band 4		
Bandwidth	RB allocation	Frequency	QPSK	16QAM	64QAM
(MHz)	RB offset	(MHz)	Actual output	Actual output	Actual outpu
	(Start RB)	, ,	power (dBm)	power (dBm)	power (dBm
	1RB	1754.3	20.94	21.20	21.11
	High (5)	1732.5	21.06	21.11	21.32
		1710.7	20.88	21.15	21.20
	1RB	1754.3	20.96	21.28	21.21
	Middle (3)	1732.5	21.12	21.14	21.17
	. ,	1710.7	20.94	21.19	21.18
	1RB	1754.3	20.83	21.24	21.25
	Low (0)	1732.5	21.08	21.03	21.26
		1710.7	20.91	21.09	21.19
	3RB	1754.3	20.87	21.07	21.08
1.4 MHz	High (3)	1732.5	21.05	21.29	21.28
	g (e)	1710.7	20.90	21.12	21.19
	3RB	1754.3	20.91	21.16	21.27
	Middle (1)	1732.5	21.08	21.37	21.19
	Wilddie (1)	1710.7	20.99	21.15	21.12
	200	1754.3	20.88	21.12	21.23
	3RB Low (0)	1732.5	21.04	21.25	21.16
	LOW (0)	1710.7	20.89	21.12	21.26
	000	1754.3	20.86	20.84	20.99
	6RB	1732.5	20.97	21.25	20.93
	(0)	1710.7	20.81	21.09	20.98
		1753.5	20.98	20.92	21.11
	1RB	1732.5	21.02	20.98	21.23
	High (14)	1711.5	20.93	21.42	21.21
		1753.5	21.06	21.08	21.23
	1RB	1732.5	21.18	21.15	21.23
	Middle (7)	1711.5	21.02	21.52	21.20
		1753.5	20.89	21.01	21.20
	1RB	1732.5	21.00	20.98	21.21
	Low (0)	1711.5	20.86	21.44	21.24
		1753.5	20.93	21.02	20.85
3 MHz	8RB	1732.5	21.10	21.28	21.00
0 1111 12	High (7)	1711.5	20.92	21.12	20.93
		1753.5	21.01	21.05	20.90
	8RB	1732.5	21.14	21.32	20.98
	Middle (4)	1711.5	20.97	21.19	20.82
		1753.5	20.94	21.00	20.97
	8RB	1733.5	21.11	21.28	20.99
	Low (0)	1711.5	20.94	21.16	20.88
		1711.5	20.95	20.97	20.82
	15RB	1733.5	21.15	21.23	21.00
	(0)	1732.5	20.94	21.23	
	i .	I/ II.5	_I 20.94	∠1.13	20.91
			20.04	24.04	04.06
5 MHz	1RB	1752.5 1732.5	20.81 21.02	21.01 21.03	21.06 21.31

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		4750.5	20.07	04.44	04.04
	1RB	1752.5	20.87	21.11	21.21
	Middle (12)	1732.5	21.05	21.08	21.21
		1712.5	20.90	21.08	21.22
	1RB	1752.5	20.81	21.09	21.29
	Low (0)	1732.5	21.02	21.02	21.18
		1712.5	20.89	20.99	21.25
	12RB	1752.5	20.93	21.05	20.84
	High (13)	1732.5	21.03	21.31	20.93
		1712.5	20.92	21.06	20.90
	12RB	1752.5	20.93	21.12	20.88
	Middle (6)	1732.5	21.12	21.32	20.99
		1712.5	20.91	21.05	20.82
	12RB	1752.5	20.92	21.08	20.95
	Low (0)	1732.5	21.05	21.29	20.96
	,	1712.5	20.83	21.06	20.94
	25RB	1752.5	20.94	21.00	20.87
	(0)	1732.5	21.08	21.24	20.96
	(-)	1712.5	20.86	20.95	20.96
	1RB	1750	20.89	21.22	21.05
	High (49)	1732.5	21.02	21.13	21.23
	g (,	1715	20.97	20.97	21.15
	1RB	1750	20.96	21.34	21.23
	Middle (24)	1732.5	21.03	21.14	21.17
		1715	20.87	20.93	21.13
		1750	20.95	21.34	21.24
		1732.5	21.14	21.09	21.27
	Low (0)	1715	20.98	20.96	21.22
	0500	1750	20.92	21.01	20.83
10 MHz	25RB	1732.5	21.06	21.28	20.96
	High (25)	1715	21.02	21.14	20.92
	0.500	1750	20.95	21.08	20.93
	25RB Middle (12)	1732.5	21.08	21.27	20.97
	Middle (12)	1715	21.07	21.11	21.00
	0555	1750	20.96	21.04	21.00
	25RB	1732.5	21.08	21.25	20.97
	Low (0)	1715	20.90	20.97	20.94
		1750	20.92	21.02	20.81
	50RB	1732.5	21.09	21.16	20.97
	(0)	1715	21.02	21.09	20.87
		1747.5	20.86	20.83	21.07
	1RB	1747.5	21.11	21.51	21.07
	High (74)			+	
		1717.5	20.93	21.38	21.14
1	1RB	1747.5	20.91	20.91	21.26
15 MHz	Middle (37)	1732.5	21.16	21.50	21.17
		1717.5	21.01	21.51	21.21
	1RB	1747.5	20.98	21.00	21.20
	Low (0)	1732.5	21.11	21.47	21.20
		1717.5	20.90	21.50	21.28



	0000	1747.5	20.94	21.07	21.00
	36RB High (38)	1732.5	21.09	21.26	20.96
	1 light (36)	1717.5	21.00	21.11	20.88
	0000	1747.5	20.94	21.05	20.96
	36RB Middle (19)	1732.5	21.10	21.25	21.00
	ivildale (19)	1717.5	21.04	21.12	20.84
	0000	1747.5	21.05	21.11	21.00
	36RB Low (0)	1732.5	21.11	21.26	20.95
	LOW (0)	1717.5	21.01	21.06	20.89
	7500	1747.5	21.01	21.15	20.86
	75RB (0)	1732.5	21.08	21.24	20.98
	(0)	1717.5	20.98	21.07	20.90
	400	1745	20.85	21.37	21.12
	1RB	1732.5	20.98	21.56	21.29
	High (99) 1RB Middle (50)	1720	21.00	21.69	21.21
		1745	20.83	21.44	21.27
		1732.5	21.05	21.50	21.19
	ivildale (50)	1720	20.97	21.59	21.20
	400	1745	20.96	21.54	21.26
	1RB Low (0)	1732.5	20.87	21.36	21.24
	LOW (0)	1720	20.83	21.54	21.25
	5000	1745	21.01	21.09	20.87
20 MHz	50RB High (50)	1732.5	21.16	21.22	20.95
	1 light (50)	1720	21.18	21.31	20.95
	FODD	1745	21.15	21.23	20.93
	50RB Middle (25)	1732.5	21.17	21.21	20.97
	ivilidale (23)	1720	21.12	21.18	20.87
	FODD	1745	21.12	21.21	21.00
	50RB Low (0)	1732.5	21.13	21.18	20.93
		1720	21.09	21.22	20.92
	400DD	1745	21.08	21.24	20.87
	100RB (0)	1732.5	21.16	21.20	20.96
	(0)	1720	21.07	21.21	20.93



The device supports downlink Release 10 LTE Carrier Aggregation (CA) only. It supports 2 and 3 carriers in the downlink. Other Release 10 features are not supported, including Uplink Carrier Aggregation, Enhanced SC-FDMA and Uplink MIMO or other antenna diversity configurations etc. All uplink communications are identical to the Release 8 Specifications. According to KDB 941225 D05A, the downlink LTE CA SAR test is not required and PAG requirements can be excluded.

The following conducted power measurement results of downlink LTE carrier aggregation are provided to quantify downlink only carrier aggregation SAR test exclusion per KDB 941225 D05A. Uplink maximum output power is measured with downlink carrier aggregation active, using the channel with highest measured maximum output power when downlink carrier aggregation is inactive, to confirm that when downlink carrier aggregation is active uplink maximum output power remains within the specified tune-up tolerance limits and not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.

The conducted power measurement results of downlink LTE CA Conduted Power are as below (3CA) – Normal power:

		(00)	<u> </u>	200				SCC1			SCC2			Power	
	1	1	F	CC	1		1		3001			3002		Po	wer
	PCC	PCC	PCC	PCC	PCC	PCC	PCC		SCC	scc		SCC	scc	Rel 8	Rel 10 DL LTE
PCC	Band	UL	UL	DL	DL	UL	DL	SCC	Band	DL	SCC	Band	DL	LTETx	CA Tx
Band	width	RB	RB	RB	RB	Chann	Chan	Band	width	Chan	Band	width	Chan	Power	
	(MHz)	size	offset	size	offset	el	nel		(MHz)	nel		(MHz)	nel	(dBm)	Power
															(dBm)
5	5	1	0	25	0	20625	2625	3	20	1575	3	20	1575	23.30	22.99
7	15	1	74	75	0	20825	2825	1	20	300	3	20	1575	23.22	22.34
7	15	1	74	75	0	20825	2825	1	20	300	20	20	6300	23.22	22.33
7	15	1	74	75	0	20825	2825	3	20	1300	3	20	1575	23.22	22.46
7	15	1	74	75	0	20825	2825	3	20	1575	8	20	3625	23.22	22.5
7	15	1	74	75	0	20825	2825	3	20	1575	20	20	6300	23.22	22.49
7	15	1	74	75	0	20825	2825	3	20	1575	28	20	9460	23.22	22.49
7	15	1	74	75	0	20825	2825	7	20	3350	1	20	300	23.22	22.37
7	15	1	74	75	0	20825	2825	7	20	3350	3	20	1575	23.22	22.38

Note: Testing is not required in bands or modes not intended/allowed for US operation.



The conducted power measurement results of downlink LTE CA Conduted Power are as below (2CA) – Normal power:

					PCC					SCC		Po	wer
DL LTE CA Class	PCC Band	PCC Band width	PCC UL RB	PCC UL RB	PCC DL RB	PCC DL RB	PCC UL Channel	PCC DL Channel	SCC Band	SCC Band width	SCC DL	Rel 8 LTETx Power	Rel 10 DL LTE CA Tx
0.000	24.14	(MHz)	size	offset	size	offset	C 110111101	C	24.14	(MHz)	Channel	(dBm)	Power (dBm)
5A-5A	5	5	1	0	25	0	20625	2625	5	10	2450	23.30	23.09
5B	5	5	1	0	25	0	20625	2625	5	3	2586	23.30	23.21
5A-1A	5	5	1	0	25	0	20625	2625	1	20	300	23.30	23.17
5A-3A	5	5	1	0	25	0	20625	2625	3	20	1575	23.30	23.27
5A-40A	5	5	1	0	25	0	20625	2625	40	20	39150	23.30	23.19
7A-7A	7	15	1	74	75	0	20825	2825	7	20	3350	23.22	23.13
7C	7	15	1	74	75	0	20825	2825	7	15	2975	23.22	23.14
7A-1A	7	15	1	74	75	0	20825	2825	1	20	300	23.22	23.21
7A-3A	7	15	1	74	75	0	20825	2825	3	20	1575	23.22	23.22
7A-20A	7	15	1	74	75	0	20825	2825	20	20	6300	23.22	23.13
41A-41A	41	20	1	0	100	0	39750	39750	41	20	41490	23.08	22.49
41C	41	20	1	0	100	0	39750	39750	41	20	39948	23.08	22.56

Note: Testing is not required in bands or modes not intended/allowed for US operation.

The conducted power measurement results of downlink LTE CA Conduted Power are as below (3CA) – Low power:

		(307	,	powe	••			1			1			1	
			F	CC					SCC1			SCC2		Power	
PCC Band	PCC Band width (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Chann el	PCC DL Chan nel	SCC Band	SCC Band width (MHz)	SCC DL Chan nel	SCC Band	SCC Band width (MHz)	SCC DL Chan nel	Rel 8 LTETx Power (dBm)	Rel 10 DL LTE CA Tx Power (dBm)
7	20	50	50	100	0	21100	3100	1	20	300	3	20	1575	19.14	19.13
7	20	50	50	100	0	21100	3100	1	20	300	20	20	6300	19.14	19.14
7	20	50	50	100	0	21100	3100	3	20	1300	3	20	1575	19.14	19.13
7	20	50	50	100	0	21100	3100	3	20	1575	8	20	3625	19.14	19.13
7	20	50	50	100	0	21100	3100	3	20	1575	20	20	6300	19.14	19.12
7	20	50	50	100	0	21100	3100	3	20	1575	28	20	9460	19.14	19.14
7	20	50	50	100	0	21100	3100	7	20	3350	1	20	300	19.14	19.1
7	20	50	50	100	0	21100	3100	7	20	3350	3	20	1575	19.14	19.13

Note: Testing is not required in bands or modes not intended/allowed for US operation.



The conducted power measurement results of downlink LTE CA Conduted Power are as below (2CA) – Low power:

					PCC					SCC		Power	
DL LTE CA Class	PCC Band	PCC Band width (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Band width (MHz)	SCC DL Channel	Rel 8 LTETx Power (dBm)	Rel 10 DL LTE CA Tx Power (dBm)
7A-7A	7	20	50	50	100	0	21350	3350	7	20	2850	19.12	19.07
7C	7	20	50	50	100	0	21350	3350	7	20	3152	19.12	19.08
7A-1A	7	20	50	50	100	0	21100	3100	1	20	300	19.14	19.05
7A-3A	7	20	50	50	100	0	21100	3100	3	20	1575	19.14	19.04
7A-20A	7	20	50	50	100	0	21100	3100	20	20	6300	19.14	19.08

Note: Testing is not required in bands or modes not intended/allowed for US operation.



11.4 Wi-Fi and BT Measurement result

The output power of BT antenna is as following:

Mode		Conducted Power (dBm)	
iviode	Channel 0 (2402MHz)	Channel 39 (2441MHz)	Channel 78(2480MHz)
GFSK	3.69	3.06	4.14
Tune up	5	5	6
EDR2M-4_DQPSK	0.72	0.08	1.35
Tune up	2	2	3
EDR3M-8DPSK	0.80	-0.11	1.35
Tune up	2	1.5	3

The average conducted power for Wi-Fi is as following:

NormalPower

802.11b (dBm)

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	18.42	/	/	1
6	18.50	18.24	18.28	18.19
11	18.32	/	/	/
Tune up	20	20	20	20

802.11g (dBm)

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	16.93	/	/	17.09	/	/	/	/
6	16.95	16.88	16.75	17.41	17.07	17.06	16.68	16.54
11	16.14	/	/	16.48	/	/	/	/
Tune up	18	18	18	18	18	18	18	18

802.11n (dBm) - HT20 (2.4G)

Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
1	15.79	/	16.21	/	/	/	/	/
6	15.85	15.51	16.24	16.06	15.98	15.76	15.66	15.55
11	15.16	/	15.67	/	/	/	/	/
Tune up	17	17	17	17	17	17	17	17

802.11n (dBm) - HT40 (2.4G)

Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
3	16.99	16.84	16.69	16.49	16.54	16.27	16.13	15.98
6	16.97	/	/	/	/	/	/	/
9	16.53	/	/	/	/	/	/	/
Tune up	17	17	17	17	17	17	17	17



802.11a (dBm)

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
36	17.93	17.89	17.78	18.27	17.94	17.38	17.07	16.93
40	17.87			18.21				
44	17.36			17.75				
48	17.34			16.53				
Tune up	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
52	17.48			17.71				
56	17.81			17.94				
60	17.89			17.95				
64	17.91	17.81	17.69	17.99	17.76	17.27	17.04	16.85
Tune up	18	18	18	18	18	18	18	18
100	17.09			17.65				
104	17.09			17.34				
108	16.91			17.11				
112	16.96			17.19				
116	17.13			17.31				
120	17.37			17.59				
124	17.55			17.74				
128	17.61			17.87				
132	17.65	17.46	17.35	17.89	17.48	16.93	16.67	16.58
136	17.55			17.82				
140	17.57			17.78				
144	17.42			17.69				
Tune up	18	18	18	18	18	18	18	18
149	17.49			18.02				
153	17.82			18.01				
157	18.12	18.09	17.89	18.29	17.99	17.39	17.13	17.01
161	17.98			18.27				
165	18.09			18.28				
Tune up	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5

The Tune up of 802.11n is 17dBm. The Tune up of 802.11ac is 14dBm.

The detail of 5G evaluation is presented in section 14.4 on page 101.

LowPower

802.11b (dBm)

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	17.21	17.48	/	/
6	17.27	17.52	17.43	17.33
11	16.63	17.03	/	/
Tune up	18.5	18.5	18.5	18.5

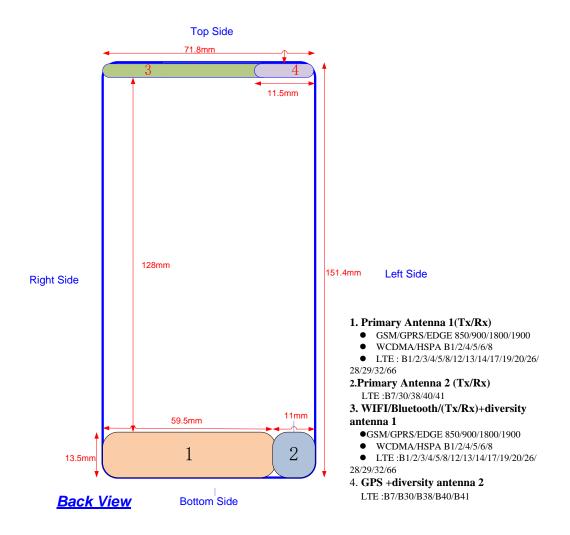


12 Simultaneous TX SAR Considerations

12.1 Introduction

The following procedures adopted from "FCC SAR Considerations for Cell Phones with Multiple Transmitters" are applicable to handsets with built-in unlicensed transmitters such as 802.11 a/b/g and Bluetooth devices which may simultaneously transmit with the licensed transmitter. For this device, the BT and Wi-Fi can transmit simultaneous with other transmitters.

12.2 Transmit Antenna Separation Distances



Picture 12.1 Antenna Locations



12.3 SAR Measurement Positions

According to the KDB941225 D06 Hot Spot SAR v01, the edges with less than 2.5 cm distance to the antennas need to be tested for SAR.

	SAR measurement positions											
Mode Front Rear Left edge Right edge Top edge Bottom edge												
Primary antenna 1	Yes	Yes	Yes	Yes	No	Yes						
Primary antenna 2	Yes	Yes	Yes	No	No	Yes						
WLAN	Yes	Yes	No	Yes	Yes	No						

12.4 Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied. The 1-g SAR test exclusion threshold for 100 MHz to 6 GHz at test separation distances≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] \cdot [$\sqrt{f(GHz)}$] \leq 3.0 for 1-g SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Table 12.1: Standalone SAR test exclusion considerations

Band/Mode	F(GHz)	Position	SAR test exclusion	RF o	•	SAR test exclusion
			threshold(mW)	dBm	mW	
Pluotooth	2.441	Head	9.60	6	3.98	Yes
Bluetooth	2.441	Body	19.20	6	3.98	Yes
2.4GHz WLAN	2.45	Head	9.58	20	100	No
Z.4GHZ WLAIN	2.45	Body	19.17	20	100	No



13 Evaluation of Simultaneous

Table 13.1: The sum of reported SAR values for main antenna and WiFi

	Position	Main antenna	WiFi	Sum
Highest reported	Left hand, Touch cheek	0.54	1.04	1.58
SAR value for Head	Right hand, Touch cheek	0.39	0.90	1.29
Highest reported	Rear 10mm	1.05	0.16	1.21
SAR value for Body	Bottom 10mm	1.32	/	1.32

Note1: we have evaluated and chose the highest value of WiFi 2.4G and 5G in the above table.

Note2: we have evaluated and chose the highest value of body 10mm and 15mm in the above table.

Table 13.2: The sum of reported SAR values for main antenna and BT

	Position	Main antenna	ВТ	Sum
Maximum reported SAR value for Head	Left hand, Touch cheek	0.54	0.17 ^[1]	0.71
Maximum reported	Rear 10mm	1.05	0.08 ^[1]	1.13
SAR value for Body	Bottom 10mm	1.32	/	1.32

^{[1] -} Estimated SAR for Bluetooth (see the table 13.3)

Table 13.3: Estimated SAR for Bluetooth

Mode/Band	F (GHz)	Docition	Distance	Upper limi	Estimated _{1g}	
Wiode/Band	r (GHZ)	Position	(mm)	dBm	mW	(W/kg)
Bluetooth	2.441	Head	5	6	3.98	0.17
Bluetooth	2.441	Body	10	6	3.98	0.08

^{* -} Maximum possible output power declared by manufacturer

When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)]·[$\sqrt{f(GHz)/x}$] W/kg for test separation distances \leq 50 mm; where x = 7.5 for 1-g SAR.

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

Conclusion:

According to the above tables, the sum of reported SAR values is<1.6W/kg. So the simultaneous transmission SAR with volume scans is not required.



14 SAR Test Result

It is determined by user manual for the distance between the EUT and the phantom bottom. The distance is 10 mm or 15mmand just applied to the condition of body worn accessory.

It is performed for all SAR measurements with area scan based 1-g SAR estimation (Fast SAR). A zoom scan measurement is added when the estimated 1-gSAR is the highest measured SAR in each exposure configuration, wireless mode and frequency band combination or more than 1.2W/kg.

The calculated SAR is obtained by the following formula:

Reported SAR = Measured SAR $\times 10^{(P_{Target} - P_{Measured})/10}$

Where P_{Target} is the power of manufacturing upper limit;

P_{Measured} is the measured power in chapter 11.

Table 14.1: Duty Cycle

Mode	Duty Cycle
Speech for GSM850	1:2
Speech for GSM1900	1:2.67
GPRS&EGPRS for GSM850	1:2
GPRS&EGPRS for GSM1900	1:2.67
WCDMA<E FDD	1:1
LTE TDD	1:1.58



14.1 SAR results for Fast SAR

Table 14.1-1: SAR Values (GSM 850 MHz Band - Head)

	Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C														
Freq	Frequency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power				
		Side	Position	No./Note	Power	Power (dBm)	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift				
Ch.	MHz		1 00111011	140./14010	(dBm)	1 ower (dBill)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)				
190	836.6	Left	Touch	/	28.65	29.5	0.166	0.20	0.205	0.25	0.02				
190	836.6	Left	Tilt	/	28.65	29.5	0.092	0.11	0.143	0.17	-0.07				
251	848.8	Right	Touch	Fig.1	28.70	29.5	0.254	0.31	0.322	0.39	0.08				
190	836.6	Right	Touch	/	28.65	29.5	0.213	0.26	0.273	0.33	0.12				
128	824.2	Right	Touch	/	28.62	29.5	0.229	0.28	0.288	0.35	0.07				
190	836.6	Right	Tilt	/	28.65	29.5	0.075	0.09	0.097	0.12	-0.03				

Note: the head SAR of GSM850 is tested with GPRS (4Txslots) mode because of VoIP.

Table 14.1-2: SAR Values (GSM 850 MHz Band - Body)

			Ambie	nt Temp	erature: 22.	9°C Liq	uid Tempera	ture: 22.5°0	2		
Fred	quency	Mode (number of	Test	Figure No./N	Conducted Power	Max. tune-up	Measured SAR(10g)	Reported SAR(10g)	Measured SAR(1g)	Reported SAR(1g)	Power Drift
Ch.	MHz	timeslots)	Position	ote	(dBm)	Power (dBm)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
190	836.6	GPRS (4)	Front	/	28.65	29.5	0.316	0.38	0.596	0.72	0.05
251	848.8	GPRS (4)	Rear	Fig.2	28.70	29.5	0.367	0.44	0.620	0.75	-0.03
190	836.6	GPRS (4)	Rear	/	28.65	29.5	0.363	0.44	0.611	0.74	0.11
128	824.2	GPRS (4)	Rear	/	28.62	29.5	0.290	0.36	0.564	0.69	0.16
190	836.6	GPRS (4)	Left	/	28.65	29.5	0.055	0.07	0.093	0.11	0.03
190	836.6	GPRS (4)	Right	/	28.65	29.5	0.132	0.16	0.231	0.28	-0.08
190	836.6	GPRS (4)	Bottom	/	28.65	29.5	0.148	0.18	0.331	0.40	0.19
251	848.8	EGPRS (4)	Rear	/	28.61	29.5	0.321	0.39	0.585	0.72	0.03

Note: The distance between the EUT and the phantom bottom is 10mm.

Table 14.1-3: SAR Values(GSM 1900 MHz Band - Head)

			Amb	pient Ten	nperature: 22	2.9°C Lic	uid Tempei	ature: 22.5	°C		
Free	quency	0:4-	Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power
Ch.	MHz	Side	Position	No./N ote	Power (dBm)	Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)
810	1909.8	Left	Touch	Fig.3	27.95	29	0.207	0.26	0.426	0.54	-0.18
661	1880	Left	Touch	/	27.91	29	0.183	0.24	0.380	0.49	0.03
512	1850.2	Left	Touch	/	27.82	29	0.136	0.18	0.275	0.36	-0.09
661	1880	Left	Tilt	/	27.91	29	0.068	0.09	0.161	0.21	0.01
661	1880	Right	Touch	/	27.91	29	0.095	0.12	0.182	0.23	0.02
661	1880	Right	Tilt	/	27.91	29	0.046	0.06	0.093	0.12	0.08

Note: the head SAR of GSM1900 is tested with GPRS (3Txslots) mode because of VoIP.



Table 14.1-4: SAR Values (GSM 1900 MHz Band - Body)

	Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C													
Frequency Mode		Mode	Test	Figure	Conducted	May tupo up	Measured	Reported	Measured	Reported	Power			
	1,	(number of		No./N	Power	Max. tune-up	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift			
Ch.	MHz	timeslots)	Position	ote	(dBm)	Power (dBm)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)			
661	1880	GPRS (3)	Front	/	27.52	28	0.216	0.24	0.361	0.40	0.04			
661	1880	GPRS (3)	Rear	/	27.52	28	0.337	0.38	0.634	0.71	0.09			
661	1880	GPRS (3)	Left	/	27.52	28	0.039	0.04	0.061	0.07	0.18			
661	1880	GPRS (3)	Right	/	27.52	28	0.062	0.07	0.114	0.13	0.02			
810	1909.8	GPRS (3)	Bottom	/	27.56	28	0.452	0.50	0.802	0.89	-0.08			
661	1880	GPRS (3)	Bottom	/	27.52	28	0.406	0.45	0.711	0.79	0.11			
512	1850.2	GPRS (3)	Bottom	Fig.4	27.56	28	0.474	0.52	0.844	0.93	-0.13			
512	1850.2	EGPRS (3)	Bottom	/	27.53	28	0.418	0.47	0.788	0.88	-0.06			

Note: The distance between the EUT and the phantom bottom is 10mm.

Table 14.1-5: SAR Values (GSM 1900 MHz Band - Body)

	Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C												
Frequency		Mode Test		Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power		
	(number of			No./N	Power		SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift		
Ch.	MHz	timeslots)	Position	ote	(dBm)	Power (dBm)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)		
661	1880	GPRS (3)	Front	/	27.91	29	0.122	0.16	0.211	0.27	0.03		
810	1909.8	GPRS (3)	Rear	Fig.5	27.95	29	0.229	0.29	0.397	0.51	-0.03		
661	1880	GPRS (3)	Rear	/	27.91	29	0.192	0.25	0.328	0.42	0.11		
512	1850.2	GPRS (3)	Rear	/	27.82	29	0.173	0.23	0.294	0.39	80.0		

Note: The distance between the EUT and the phantom bottom is 15mm.

Table 14.1-6: SAR Values (WCDMA 850 MHz Band - Head)

	Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C												
Frequency			.	-	Conducted	Max.	Measured	Reported	Measured	Reported	Power		
Ch.	MHz	Side	Test Position	Figure No./Note	l Power	tune-up Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)		
4182	836.4	Left	Touch	/	23.56	24	0.140	0.15	0.169	0.19	0.08		
4182	836.4	Left	Tilt	/	23.56	24	0.115	0.13	0.151	0.17	-0.02		
4233	846.6	Right	Touch	/	23.68	24	0.203	0.22	0.258	0.28	0.08		
4182	836.4	Right	Touch	Fig.6	23.56	24	0.206	0.23	0.262	0.29	0.13		
4132	826.4	Right	Touch	/	23.58	24	0.190	0.21	0.240	0.26	0.11		
4182	836.4	Right	Tilt	/	23.56	24	0.115	0.13	0.149	0.16	0.09		



Table 14.1-7: SAR Values (WCDMA 850 MHz Band - Body)

			Ambient	Temperatur	re: 22.9 °C	Liquid Ter	mperature:	22.5°C		
Frequency		Test	Figure	Conducted		Measured	Reported	Measured	Reported	Power
	<u> </u>	Position	No./N	Power	Max. tune-up Power (dBm)	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift
Ch.	MHz	Position	ote	(dBm)	Power (dbill)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)
4182	836.4	Front	/	23.56	24	0.213	0.24	0.381	0.42	0.09
4233	846.6	Rear	Fig.7	23.68	24	0.259	0.28	0.432	0.47	-0.09
4182	836.4	Rear	/	23.56	24	0.246	0.27	0.410	0.45	0.12
4132	826.4	Rear	/	23.58	24	0.255	0.28	0.421	0.46	0.06
4182	836.4	Left	/	23.56	24	0.059	0.07	0.098	0.11	-0.03
4182	836.4	Right	/	23.56	24	0.064	0.07	0.107	0.12	0.02
4182	836.4	Bottom	/	23.56	24	0.108	0.12	0.250	0.28	0.09

Note: The distance between the EUT and the phantom bottom is 10mm.

Table 14.1-8: SAR Values(WCDMA 1700 MHz Band - Head)

	Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C												
Frequency				Figure	Conducted	Max.	Measured	Reported	Measured	Reported	Power		
Ch.	MHz	Side	Test Position	Figure No./Note	Power (dBm)	tune-up Power (dBm)	SAR(10g) (W/kg)	SAR(10g) (W/kg)	SAR(1g) (W/kg)	SAR(1g) (W/kg)	Drift (dB)		
1738	1752.6	Left	Touch	/	23.39	24	0.049	0.06	0.075	0.09	0.09		
1637	1732.4	Left	Touch	/	23.41	24	0.072	0.08	0.113	0.13	-0.03		
1537	1712.4	Left	Touch	Fig.8	23.55	24	0.088	0.10	0.133	0.15	0.01		
1637	1732.4	Left	Tilt	/	23.41	24	0.023	0.03	0.038	0.04	0.03		
1637	1732.4	Right	Touch	/	23.41	24	0.050	0.06	0.074	0.08	-0.09		
1637	1732.4	Right	Tilt	/	23.41	24	0.026	0.03	0.043	0.05	0.02		

Table 14.1-9: SAR Values (WCDMA 1700 MHz Band - Body)

	Table 14.1 5. OAR Values (Wooling 1766 in 12 Balla Body)											
		Α	mbient ⁻	Temperature	e: 22.9 °C	Liquid Temperature: 22.5°C						
Frequency		Test	Figure	Conducted	Max. tune-up	Measured	Reported	Measured	Reported	Power		
	· · · · · · · · · · · · · · · · · · ·	Position	No./N	Power	•	SAR(10g)	SAR(10g)	SAR(1g)	SAR(1g)	Drift		
Ch.	MHz	Position	ote	(dBm)	Power (dBm)	(W/kg)	(W/kg)	(W/kg)	(W/kg)	(dB)		
1637	1732.4	Front	/	21.48	22	0.214	0.24	0.353	0.40	0.03		
1738	1752.6	Rear	Fig.9	21.46	22	0.493	0.56	0.927	1.05	-0.03		
1637	1732.4	Rear	/	21.48	22	0.454	0.51	0.851	0.96	0.11		
1537	1712.4	Rear	/	21.49	22	0.369	0.41	0.700	0.79	0.09		
1637	1732.4	Left	/	21.48	22	0.043	0.05	0.068	0.08	-0.02		
1637	1732.4	Right	/	21.48	22	0.074	0.08	0.135	0.15	0.13		
1637	1732.4	Bottom	/	21.48	22	0.317	0.36	0.567	0.64	0.06		

Note1: The distance between the EUT and the phantom bottom is 10mm.