

Table 11-17 LTE2500-TDD41 #2 PC3 AP OFF

LTE2500-TDD41 #2 PC3 AP OFF									
BandWidth	RB No./Start	Channel	Tune-up	Measured Power (dBm) & MPR					
				QPSK		16QAM		64QAM	
				Measured Power	MPR	Measured Power	MPR	Measured Power	MPR
5MHz	1H	41565	23.50	22.94	0	22.29	1	20.11	2
		41093	23.50	22.93	0	22.40	1	20.05	2
		40620	23.50	22.91	0	22.17	1	20.21	2
		40148	23.50	22.91	0	22.28	1	20.03	2
		39675	23.50	22.98	0	22.47	1	20.25	2
	1M	41565	23.50	23.15	0	22.49	1	20.07	2
		41093	23.50	23.08	0	22.46	1	20.06	2
		40620	23.50	23.11	0	22.37	1	20.18	2
		40148	23.50	23.12	0	22.45	1	20.14	2
		39675	23.50	23.20	0	22.47	1	20.29	2
	1L	41565	23.50	22.91	0	22.28	1	20.12	2
		41093	23.50	22.84	0	22.35	1	20.08	2
		40620	23.50	22.91	0	22.16	1	20.20	2
		40148	23.50	22.88	0	22.25	1	20.13	2
		39675	23.50	23.01	0	22.42	1	20.31	2
	12H	41565	23.50	21.96	1	20.93	2	19.20	3
		41093	23.50	21.99	1	21.05	2	19.07	3
		40620	23.50	21.91	1	20.94	2	19.25	3
		40148	23.50	21.96	1	20.91	2	19.09	3
		39675	23.50	22.08	1	21.20	2	19.36	3
	12M	41565	23.50	22.01	1	20.99	2	19.21	3
		41093	23.50	21.96	1	21.07	2	19.13	3
		40620	23.50	21.95	1	20.99	2	19.19	3
		40148	23.50	22.03	1	20.97	2	19.16	3
		39675	23.50	22.06	1	21.14	2	19.27	3
	12L	41565	23.50	22.00	1	20.95	2	19.25	3
		41093	23.50	21.96	1	21.01	2	19.06	3
		40620	23.50	21.91	1	20.95	2	19.16	3
		40148	23.50	21.95	1	20.93	2	19.05	3
		39675	23.50	22.04	1	21.10	2	19.21	3
	25	41565	23.50	21.95	1	21.00	2	19.27	3
		41093	23.50	22.00	1	20.99	2	19.16	3
		40620	23.50	21.92	1	20.95	2	19.24	3
		40148	23.50	21.94	1	20.96	2	19.15	3
		39675	23.50	22.02	1	21.06	2	19.33	3
10MHz	1H	41540	23.50	22.96	0	22.45	1	20.06	2
		41080	23.50	22.89	0	22.42	1	20.03	2
		40620	23.50	22.98	0	22.22	1	20.11	2
		40160	23.50	22.93	0	22.42	1	20.05	2
		39700	23.50	22.98	0	22.49	1	20.28	2
	1M	41540	23.50	23.00	0	22.50	1	20.26	2
		41080	23.50	22.91	0	22.42	1	20.19	2
		40620	23.50	23.04	0	22.26	1	20.27	2
		40160	23.50	22.97	0	22.50	1	20.16	2
		39700	23.50	23.03	0	22.45	1	20.36	2
	1L	41540	23.50	22.91	0	22.42	1	20.13	2
		41080	23.50	22.83	0	22.39	1	20.05	2
		40620	23.50	22.99	0	22.20	1	20.24	2
		40160	23.50	22.93	0	22.39	1	20.17	2
		39700	23.50	22.96	0	22.46	1	20.26	2
	25H	41540	23.50	22.01	1	21.00	2	19.29	3
		41080	23.50	22.00	1	21.04	2	19.14	3
		40620	23.50	21.93	1	20.94	2	19.20	3
		40160	23.50	21.98	1	20.97	2	19.15	3
		39700	23.50	22.14	1	21.16	2	19.40	3
	25M	41540	23.50	22.02	1	21.02	2	19.33	3
		41080	23.50	21.96	1	21.00	2	19.18	3
		40620	23.50	21.93	1	20.96	2	19.28	3
		40160	23.50	22.00	1	20.99	2	19.25	3
		39700	23.50	22.08	1	21.15	2	19.41	3
	25L	41540	23.50	22.03	1	21.06	2	19.30	3
		41080	23.50	21.96	1	21.00	2	19.23	3
		40620	23.50	21.93	1	20.97	2	19.32	3
		40160	23.50	21.98	1	20.97	2	19.22	3

	50	39700	23.50	22.05	1	21.10	2	19.29	3
		41540	23.50	21.98	1	21.02	2	19.35	3
		41080	23.50	22.00	1	21.05	2	19.17	3
		40620	23.50	21.94	1	20.92	2	19.18	3
		40160	23.50	21.96	1	20.98	2	19.12	3
		39700	23.50	22.12	1	21.16	2	19.34	3
15MHz	1H	41515	23.50	22.92	0	22.40	1	20.08	2
		41068	23.50	22.81	0	22.25	1	20.10	2
		40620	23.50	22.91	0	22.17	1	20.06	2
		40173	23.50	22.90	0	22.41	1	20.08	2
		39725	23.50	22.88	0	22.33	1	20.27	2
	1M	41515	23.50	22.94	0	22.38	1	20.18	2
		41068	23.50	22.79	0	22.26	1	20.05	2
		40620	23.50	22.95	0	22.19	1	20.22	2
		40173	23.50	22.90	0	22.40	1	20.03	2
		39725	23.50	22.97	0	22.38	1	20.32	2
	1L	41515	23.50	22.93	0	22.42	1	20.13	2
		41068	23.50	22.86	0	22.27	1	20.11	2
		40620	23.50	22.96	0	22.22	1	20.24	2
		40173	23.50	22.89	0	22.42	1	20.09	2
		39725	23.50	22.96	0	22.40	1	20.30	2
	36H	41515	23.50	21.98	1	20.93	2	19.12	3
		41068	23.50	21.98	1	20.99	2	19.08	3
		40620	23.50	21.89	1	20.88	2	19.12	3
		40173	23.50	21.96	1	20.93	2	19.06	3
		39725	23.50	22.13	1	21.08	2	19.20	3
	36M	41515	23.50	22.03	1	20.99	2	19.18	3
		41068	23.50	21.99	1	20.97	2	19.07	3
		40620	23.50	21.95	1	20.89	2	19.18	3
		40173	23.50	21.98	1	20.94	2	19.09	3
		39725	23.50	22.10	1	21.08	2	19.19	3
	36L	41515	23.50	21.97	1	20.90	2	19.17	3
		41068	23.50	21.99	1	20.97	2	19.09	3
		40620	23.50	21.90	1	20.87	2	19.12	3
		40173	23.50	21.97	1	20.92	2	19.08	3
		39725	23.50	22.07	1	21.04	2	19.20	3
	75	41515	23.50	22.00	1	21.02	2	19.13	3
		41068	23.50	22.01	1	20.99	2	19.15	3
		40620	23.50	21.92	1	20.91	2	19.60	3
		40173	23.50	21.94	1	20.95	2	19.11	3
		39725	23.50	22.06	1	21.04	2	19.28	3
20MHz	1H	41490	23.50	22.96	0	22.26	1	20.14	2
		41055	23.50	22.93	0	22.15	1	20.11	2
		40620	23.50	22.86	0	22.34	1	20.07	2
		40185	23.50	22.90	0	22.22	1	20.02	2
		39750	23.50	22.99	0	22.22	1	20.13	2
	1M	41490	23.50	23.21	0	22.48	1	20.19	2
		41055	23.50	23.19	0	22.36	1	20.07	2
		40620	23.50	23.09	0	22.44	1	20.13	2
		40185	23.50	23.19	0	22.46	1	20.17	2
		39750	23.50	23.29	0	22.49	1	20.29	2
	1L	41490	23.50	22.92	0	22.24	1	20.16	2
		41055	23.50	22.93	0	22.19	1	20.14	2
		40620	23.50	22.83	0	22.30	1	20.28	2
		40185	23.50	22.91	0	22.18	1	20.14	2
		39750	23.50	23.03	0	22.23	1	20.22	2
	50H	41490	23.50	21.94	1	20.92	2	19.12	3
		41055	23.50	21.95	1	20.97	2	19.06	3
		40620	23.50	21.88	1	20.92	2	19.12	3
		40185	23.50	21.85	1	20.84	2	19.07	3
		39750	23.50	22.06	1	21.06	2	19.23	3
	50M	41490	23.50	22.00	1	20.97	2	19.16	3
		41055	23.50	21.98	1	20.94	2	19.13	3
		40620	23.50	21.91	1	20.97	2	19.21	3
		40185	23.50	21.92	1	20.92	2	19.04	3
		39750	23.50	22.05	1	21.06	2	19.36	3
	50L	41490	23.50	21.95	1	20.91	2	19.27	3
		41055	23.50	21.92	1	20.92	2	19.08	3
		40620	23.50	21.90	1	20.96	2	19.24	3
		40185	23.50	21.93	1	20.91	2	19.09	3
		39750	23.50	22.01	1	20.96	2	19.12	3
	100	41490	23.50	21.95	1	20.93	2	19.20	3
		41055	23.50	21.96	1	20.97	2	19.12	3
		40620	23.50	21.91	1	20.92	2	19.18	3
		40185	23.50	21.88	1	20.90	2	19.06	3
		39750	23.50	22.05	1	21.02	2	19.26	3

Table 11-18 LTE2500-TDD41 #3 PC2 AP ON

LTE2500-TDD41 #3 PC2 AP ON									
BandWidth	RB No./Start	Channel	Tune-up	Measured Power (dBm) & MPR					
				QPSK		16QAM		64QAM	
				Measured Power	MPR	Measured Power	MPR	Measured Power	MPR
5MHz	1H	41565	25.5	25.02	0	24.31	1	23.17	2
		41093	25.5	24.99	0	24.32	1	23.06	2
		40620	25.5	24.88	0	24.12	1	23.07	2
		40148	25.5	24.99	0	24.21	1	23.13	2
		39675	25.5	25.09	0	24.46	1	23.3	2
	1M	41565	25.5	25.26	0	24.48	1	23.14	2
		41093	25.5	25.15	0	24.49	1	23.08	2
		40620	25.5	25.08	0	24.34	1	23.22	2
		40148	25.5	25.17	0	24.43	1	23.15	2
		39675	25.5	25.30	0	24.46	1	23.28	2
	1L	41565	25.5	25.08	0	24.28	1	23.19	2
		41093	25.5	24.95	0	24.33	1	23.15	2
		40620	25.5	24.90	0	24.12	1	23.25	2
		40148	25.5	24.95	0	24.24	1	23.12	2
		39675	25.5	25.05	0	24.41	1	23.19	2
	12H	41565	25.5	24.08	1	23.00	2	22.34	3
		41093	25.5	24.04	1	23.09	2	22.27	3
		40620	25.5	23.95	1	22.94	2	22.3	3
		40148	25.5	24.03	1	23.00	2	22.19	3
		39675	25.5	24.15	1	23.22	2	22.41	3
	12M	41565	25.5	24.08	1	23.06	2	22.32	3
		41093	25.5	24.05	1	23.11	2	22.28	3
		40620	25.5	23.98	1	23.02	2	22.36	3
		40148	25.5	24.02	1	23.02	2	22.31	3
		39675	25.5	24.14	1	23.19	2	22.4	3
	12L	41565	25.5	24.06	1	23.00	2	22.36	3
		41093	25.5	23.99	1	23.05	2	22.19	3
		40620	25.5	23.94	1	22.99	2	22.31	3
		40148	25.5	23.97	1	22.98	2	22.25	3
		39675	25.5	24.13	1	23.17	2	22.4	3
	25	41565	25.5	24.04	1	23.07	2	22.35	3
		41093	25.5	24.05	1	23.03	2	22.26	3
		40620	25.5	23.95	1	22.94	2	22.34	3
		40148	25.5	23.97	1	23.00	2	22.28	3
		39675	25.5	24.10	1	23.14	2	22.36	3
10MHz	1H	41540	25.5	25.14	0	24.29	1	23.22	2
		41080	25.5	25.13	0	24.38	1	23.1	2
		40620	25.5	25.11	0	24.31	1	23.21	2
		40160	25.5	25.08	0	24.23	1	23.09	2
		39700	25.5	25.22	0	24.47	1	23.31	2
	1M	41540	25.5	25.38	0	24.27	1	23.31	2
		41080	25.5	25.30	0	24.38	1	23.15	2
		40620	25.5	25.33	0	24.36	1	23.28	2
		40160	25.5	25.40	0	24.27	1	23.27	2
		39700	25.5	25.47	0	24.42	1	23.32	2
	1L	41540	25.5	25.07	0	24.17	1	23.27	2
		41080	25.5	25.07	0	24.33	1	23.16	2
		40620	25.5	25.09	0	24.30	1	23.29	2
		40160	25.5	25.12	0	24.22	1	23.26	2
		39700	25.5	25.24	0	24.47	1	23.27	2
	25H	41540	25.5	24.01	1	23.06	2	22.46	3
		41080	25.5	24.09	1	23.07	2	22.3	3
		40620	25.5	23.99	1	22.99	2	22.43	3
		40160	25.5	24.01	1	23.01	2	22.27	3
		39700	25.5	24.16	1	23.16	2	22.49	3
	25M	41540	25.5	24.08	1	23.07	2	22.43	3
		41080	25.5	24.02	1	23.01	2	22.27	3
		40620	25.5	23.53	1	23.00	2	22.37	3
		40160	25.5	24.45	1	23.01	2	22.35	3
		39700	25.5	24.17	1	23.14	2	22.43	3
	25L	41540	25.5	24.09	1	23.08	2	22.47	3
		41080	25.5	24.04	1	23.04	2	22.32	3
		40620	25.5	24.01	1	22.99	2	22.45	3
		40160	25.5	24.03	1	23.01	2	22.31	3

	50	39700	25.5	24.14	1	23.11	2	22.33	3
		41540	25.5	24.07	1	23.03	2	22.39	3
		41080	25.5	24.07	1	23.05	2	22.21	3
		40620	25.5	24.02	1	23.02	2	22.38	3
		40160	25.5	24.13	1	22.97	2	22.23	3
		39700	25.5	24.15	1	23.15	2	22.39	3
15MHz	1H	41515	25.5	24.96	0	24.39	1	23.21	2
		41068	25.5	24.92	0	24.26	1	23.08	2
		40620	25.5	24.88	0	24.16	1	23.06	2
		40173	25.5	24.87	0	24.35	1	23.11	2
		39725	25.5	25.02	0	24.35	1	23.26	2
	1M	41515	25.5	24.95	0	24.39	1	23.17	2
		41068	25.5	24.92	0	24.24	1	23.07	2
		40620	25.5	24.88	0	24.21	1	23.19	2
		40173	25.5	24.97	0	24.39	1	23.17	2
		39725	25.5	25.08	0	24.34	1	23.31	2
	1L	41515	25.5	24.94	0	24.33	1	23.19	2
		41068	25.5	24.88	0	24.26	1	23.09	2
		40620	25.5	24.93	0	24.17	1	23.16	2
		40173	25.5	24.93	0	24.36	1	23.15	2
		39725	25.5	24.99	0	24.34	1	23.21	2
	36H	41515	25.5	24.07	1	23.01	2	22.25	3
		41068	25.5	24.09	1	23.02	2	22.18	3
		40620	25.5	23.96	1	22.95	2	22.21	3
		40173	25.5	24.01	1	22.94	2	22.16	3
		39725	25.5	24.18	1	23.14	2	22.37	3
	36M	41515	25.5	24.09	1	23.07	2	22.38	3
		41068	25.5	24.02	1	23.01	2	22.29	3
		40620	25.5	23.98	1	22.99	2	22.26	3
		40173	25.5	24.02	1	22.96	2	22.17	3
		39725	25.5	24.15	1	23.13	2	22.29	3
	36L	41515	25.5	24.07	1	23.00	2	22.28	3
		41068	25.5	24.07	1	23.03	2	22.26	3
		40620	25.5	23.97	1	22.97	2	22.31	3
		40173	25.5	24.00	1	22.94	2	22.16	3
		39725	25.5	24.12	1	23.11	2	22.25	3
	75	41515	25.5	24.10	1	23.06	2	22.36	3
		41068	25.5	24.09	1	23.05	2	22.27	3
		40620	25.5	23.99	1	23.00	2	22.33	3
		40173	25.5	23.98	1	22.96	2	22.19	3
		39725	25.5	24.13	1	23.11	2	22.3	3
20MHz	1H	41490	25.5	25.00	0	24.27	1	23.16	2
		41055	25.5	25.01	0	24.09	1	23.07	2
		40620	25.5	24.88	0	24.36	1	23.16	2
		40185	25.5	24.87	0	24.21	1	23.1	2
		39750	25.5	25.08	0	24.18	1	23.09	2
	1M	41490	25.5	25.18	0	24.45	1	23.26	2
		41055	25.5	25.38	0	24.33	1	23.19	2
		40620	25.5	25.12	0	24.45	1	23.26	2
		40185	25.5	25.10	0	24.44	1	23.22	2
		39750	25.5	25.39	0	24.43	1	23.31	2
	1L	41490	25.5	24.93	0	24.20	1	23.21	2
		41055	25.5	24.99	0	24.06	1	23.19	2
		40620	25.5	24.86	0	24.29	1	23.21	2
		40185	25.5	24.87	0	24.18	1	23.14	2
		39750	25.5	25.11	0	24.19	1	23.22	2
	50H	41490	25.5	24.00	1	22.99	2	22.29	3
		41055	25.5	24.00	1	23.00	2	22.14	3
		40620	25.5	23.92	1	22.97	2	22.26	3
		40185	25.5	23.89	1	22.89	2	22.15	3
		39750	25.5	24.12	1	23.12	2	22.4	3
	50M	41490	25.5	24.05	1	23.04	2	22.39	3
		41055	25.5	24.01	1	23.00	2	22.19	3
		40620	25.5	23.95	1	22.99	2	22.25	3
		40185	25.5	23.95	1	22.95	2	22.29	3
		39750	25.5	24.10	1	23.09	2	22.36	3
	50L	41490	25.5	23.98	1	22.97	2	22.32	3
		41055	25.5	23.99	1	22.99	2	22.15	3
		40620	25.5	23.93	1	22.99	2	22.31	3
		40185	25.5	23.92	1	22.89	2	22.28	3
		39750	25.5	24.01	1	23.00	2	22.29	3
	100	41490	25.5	24.13	1	23.01	2	22.34	3
		41055	25.5	24.03	1	23.01	2	22.27	3
		40620	25.5	23.94	1	22.96	2	22.32	3
		40185	25.5	23.90	1	22.89	2	22.15	3
		39750	25.5	24.07	1	23.08	2	22.34	3

Table 11-19 LTE2500-TDD41 #4 PC2 AP OFF

LTE2500-TDD41 #4 PC2 AP OFF									
BandWidth	RB No./Start	Channel	Tune-up	Measured Power (dBm) & MPR					
				QPSK		16QAM		64QAM	
				Measured Power	MPR	Measured Power	MPR	Measured Power	MPR
5MHz	1H	41565	26.5	25.97	0	25.21	1	23.06	2
		41093	26.5	25.94	0	25.28	1	23.05	2
		40620	26.5	25.91	0	25.11	1	23.07	2
		40148	26.5	25.92	0	25.21	1	23.04	2
		39675	26.5	26.04	0	25.39	1	23.18	2
	1M	41565	26.5	26.19	0	25.40	1	23.11	2
		41093	26.5	26.14	0	25.45	1	23	2
		40620	26.5	26.16	0	25.35	1	23.09	2
		40148	26.5	26.14	0	25.40	1	23.03	2
		39675	26.5	26.27	0	25.41	1	23.16	2
	1L	41565	26.5	25.95	0	25.18	1	23.13	2
		41093	26.5	25.90	0	25.27	1	23.02	2
		40620	26.5	25.90	0	25.15	1	23.16	2
		40148	26.5	25.90	0	25.22	1	23.07	2
		39675	26.5	26.01	0	25.40	1	23.15	2
	12H	41565	26.5	24.99	1	23.97	2	22.21	3
		41093	26.5	24.99	1	24.10	2	22.13	3
		40620	26.5	25.00	1	24.03	2	22.24	3
		40148	26.5	25.01	1	24.00	2	22.18	3
		39675	26.5	25.14	1	24.23	2	22.35	3
	12M	41565	26.5	25.06	1	24.01	2	22.23	3
		41093	26.5	25.02	1	24.09	2	22.17	3
		40620	26.5	25.05	1	24.04	2	22.28	3
		40148	26.5	25.03	1	24.02	2	22.17	3
		39675	26.5	25.14	1	24.22	2	22.27	3
	12L	41565	26.5	25.01	1	24.02	2	22.25	3
		41093	26.5	24.98	1	24.07	2	22.08	3
		40620	26.5	24.99	1	24.02	2	22.19	3
		40148	26.5	25.00	1	23.96	2	22.15	3
		39675	26.5	25.09	1	24.19	2	22.3	3
	25	41565	26.5	24.99	1	24.01	2	22.15	3
		41093	26.5	25.04	1	24.02	2	22.16	3
		40620	26.5	24.99	1	23.97	2	22.27	3
		40148	26.5	24.97	1	24.03	2	22.13	3
		39675	26.5	25.10	1	24.13	2	22.28	3
10MHz	1H	41540	26.5	26.00	0	25.34	1	23.14	2
		41080	26.5	25.94	0	25.26	1	23.01	2
		40620	26.5	25.97	0	25.15	1	23.08	2
		40160	26.5	25.92	0	25.34	1	23.05	2
		39700	26.5	26.03	0	25.40	1	23.15	2
	1M	41540	26.5	26.07	0	25.36	1	23.16	2
		41080	26.5	25.96	0	25.30	1	23.04	2
		40620	26.5	26.05	0	25.19	1	23.16	2
		40160	26.5	26.03	0	25.42	1	23.16	2
		39700	26.5	26.10	0	25.45	1	23.21	2
	1L	41540	26.5	25.98	0	25.26	1	23.18	2
		41080	26.5	25.89	0	25.25	1	23.07	2
		40620	26.5	25.97	0	25.15	1	23.18	2
		40160	26.5	25.92	0	25.33	1	23.07	2
		39700	26.5	26.02	0	25.42	1	23.16	2
	25H	41540	26.5	25.04	1	24.02	2	22.33	3
		41080	26.5	25.05	1	24.05	2	22.2	3
		40620	26.5	25.00	1	23.98	2	22.27	3
		40160	26.5	25.03	1	24.04	2	22.21	3
		39700	26.5	25.19	1	24.20	2	22.4	3
	25M	41540	26.5	25.05	1	24.05	2	22.34	3
		41080	26.5	25.02	1	24.04	2	22.13	3
		40620	26.5	25.01	1	24.00	2	22.3	3
		40160	26.5	25.03	1	24.06	2	22.28	3
		39700	26.5	25.16	1	24.18	2	22.35	3
	25L	41540	26.5	25.06	1	24.05	2	22.26	3
		41080	26.5	25.04	1	24.04	2	22.2	3
		40620	26.5	25.01	1	24.00	2	22.31	3
		40160	26.5	25.03	1	24.05	2	22.18	3

	50	39700	26.5	25.12	1	24.16	2	22.29	3
		41540	26.5	25.06	1	24.04	2	22.17	3
		41080	26.5	25.04	1	24.06	2	22.21	3
		40620	26.5	24.99	1	23.97	2	22.29	3
		40160	26.5	25.00	1	24.02	2	22.1	3
		39700	26.5	25.17	1	24.21	2	22.36	3
15MHz	1H	41515	26.5	25.98	0	25.26	1	23.06	2
		41068	26.5	25.87	0	25.14	1	22.93	2
		40620	26.5	25.92	0	25.05	1	23.04	2
		40173	26.5	25.90	0	25.30	1	23.02	2
		39725	26.5	25.97	0	25.32	1	23.16	2
	1M	41515	26.5	26.00	0	25.30	1	23.03	2
		41068	26.5	25.89	0	25.16	1	22.94	2
		40620	26.5	25.98	0	25.13	1	23.16	2
		40173	26.5	25.98	0	25.36	1	23.04	2
		39725	26.5	26.06	0	25.33	1	23.13	2
	1L	41515	26.5	25.99	0	25.27	1	23.15	2
		41068	26.5	25.88	0	25.16	1	23.04	2
		40620	26.5	25.92	0	25.21	1	23.09	2
		40173	26.5	25.97	0	25.31	1	23.05	2
		39725	26.5	26.03	0	25.36	1	23.16	2
	36H	41515	26.5	25.07	1	24.03	2	22.14	3
		41068	26.5	25.11	1	24.05	2	22.13	3
		40620	26.5	25.01	1	23.94	2	22.13	3
		40173	26.5	25.06	1	23.97	2	22.05	3
		39725	26.5	25.22	1	24.18	2	22.32	3
	36M	41515	26.5	25.13	1	24.04	2	22.19	3
		41068	26.5	25.09	1	24.02	2	22.1	3
		40620	26.5	25.04	1	23.96	2	22.18	3
		40173	26.5	25.11	1	24.01	2	22.17	3
		39725	26.5	25.22	1	24.17	2	22.28	3
	36L	41515	26.5	25.09	1	24.00	2	22.17	3
		41068	26.5	25.07	1	24.02	2	22.09	3
		40620	26.5	25.02	1	23.94	2	22.21	3
		40173	26.5	25.07	1	24.01	2	22.18	3
		39725	26.5	25.18	1	24.15	2	22.25	3
	75	41515	26.5	25.11	1	24.06	2	22.29	3
		41068	26.5	25.12	1	24.06	2	22.17	3
		40620	26.5	25.02	1	24.00	2	22.19	3
		40173	26.5	25.06	1	24.02	2	22.1	3
		39725	26.5	25.19	1	24.15	2	22.24	3
20MHz	1H	41490	26.5	25.96	0	25.31	1	23.08	2
		41055	26.5	26.02	0	25.17	1	22.85	2
		40620	26.5	25.92	0	25.02	1	23.06	2
		40185	26.5	25.89	0	25.29	1	23.02	2
		39750	26.5	26.08	0	25.27	1	23.1	2
	1M	41490	26.5	26.17	0	25.41	1	23.19	2
		41055	26.5	26.23	0	25.38	1	23.05	2
		40620	26.5	26.15	0	25.28	1	23.16	2
		40185	26.5	26.14	0	25.46	1	23.18	2
		39750	26.5	26.34	0	25.42	1	23.19	2
	1L	41490	26.5	25.95	0	25.27	1	23.12	2
		41055	26.5	26.00	0	25.16	1	23.1	2
		40620	26.5	25.89	0	25.11	1	23.16	2
		40185	26.5	25.90	0	25.34	1	23.16	2
		39750	26.5	26.09	0	25.30	1	23.13	2
	50H	41490	26.5	24.98	1	24.04	2	22.16	3
		41055	26.5	25.02	1	23.97	2	22.09	3
		40620	26.5	24.94	1	23.96	2	22.23	3
		40185	26.5	24.94	1	23.95	2	22.07	3
		39750	26.5	25.13	1	24.11	2	22.33	3
	50M	41490	26.5	25.03	1	24.07	2	22.28	3
		41055	26.5	25.02	1	23.98	2	22.16	3
		40620	26.5	24.97	1	23.98	2	22.28	3
		40185	26.5	25.00	1	24.05	2	22.15	3
		39750	26.5	25.13	1	24.10	2	22.31	3
	50L	41490	26.5	24.97	1	24.00	2	22.21	3
		41055	26.5	25.00	1	23.94	2	22.17	3
		40620	26.5	24.95	1	23.98	2	22.3	3
		40185	26.5	24.99	1	24.02	2	22.11	3
		39750	26.5	25.04	1	24.03	2	22.15	3
	100	41490	26.5	24.98	1	23.98	2	22.29	3
		41055	26.5	25.03	1	23.98	2	22.16	3
		40620	26.5	24.97	1	23.96	2	22.35	3
		40185	26.5	24.95	1	23.94	2	22.13	3
		39750	26.5	25.10	1	24.08	2	22.26	3

According to November 2017 TCB workshop, Uplink CA SAR Test Guidance as follows:

- a) When the maximum output for UL CA is \leq standalone LTE mode(without CA)
 - PCC is configured according to the highest standalone SAR configuration tested
 - SCC and subsequent CCs are configured according to procedures used for power measurement and parameters (BW, RB etc.) similar to that used for the PCC
- b) When the Reported SAR for UL CA configuration, described above, is $>1.2\text{W/kg}$, UL CA SAR is also required for all required test channels(PCC based)
- c) UL CA SAR is also required for standalone SAR configurations $>1.2\text{W/kg}$ when they are scaled to the UL CA power level.

The measurement results of downlink LTE CA Conducted Power are as below (AP OFF):

DL LTE CA Class	PCC								SCC			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 Channel	PCC DL Channel	SCC Band	SCC Band width (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	DL LTE CA Tx Power(dBm)	Tune- up
25A-25A	25	20	1	50	100	0	26590	8590	25	20	8140	23.14	23.32	24
25A-26A	25	20	1	50	100	0	26590	8590	26	15	8865	23.14	23.32	24
25A-41A PC3	25	20	1	50	100	0	26590	8590	41	20	40620	23.14	23.33	24
26A-25A	26	15	1	74	75	0	26965	8965	25	20	8365	23.09	23.29	24
41A-25A PC3	41	20	1	50	100	0	39750	39750	25	20	8365	23.29	23.31	23.5
41C PC3	41	20	1	50	100	0	39750	39750	41	20	39948	23.29	23.26	23.5
41C PC2	41	20	1	50	100	0	39750	39750	41	20	39948	26.34	26.29	26.5

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



The measurement results of uplink LTE CA Conducted Power are as below (AP OFF):

UL LTE CA Class	PCC								SCC			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 Channel	PCC DL Channel	SCC Band	SCC Band width (MHz)	SCC UL Channel	Rel 8 LTETx Power(dBm)	UL LTE CA Tx Power (dBm)	Tune- up
41C PC3	41	20	1	50	100	0	39750	39750	41	20	39948	23.29	23.25	23.5
41C PC2	41	20	1	50	100	0	39750	39750	41	20	39948	26.34	26.25	26.5

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

The measurement results of downlink LTE CA Conducted Power are as below (AP ON):

DL LTE CA Class	PCC								SCC			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 Channel	PCC DL Channel	SCC Band	SCC Band width (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	DL LTE CA Tx Power(dBm)	Tune- up
41A-25A PC3	41	20	1	50	100	0	39750	39750	25	20	8365	22.32	22.18	22.5
41C PC3	41	20	1	50	100	0	39750	39750	41	20	39948	22.32	22.36	22.5
41C PC2	41	20	1	50	100	0	39750	39750	41	20	39948	25.38	25.19	25.5

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

The measurement results of uplink LTE CA Conducted Power are as below (AP ON):

UL LTE CA Class	PCC								SCC			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 Channel	PCC DL Channel	SCC Band	SCC Band width (MHz)	SCC UL Channel	Rel 8 LTETx Power(dBm)	UL LTE CA Tx Power(dBm)	Tune- up
41C PC3	41	20	1	50	100	0	39750	39750	41	20	39948	22.32	22.31	22.5
41C PC2	41	20	1	50	100	0	41292	41292	41	20	41490	25.38	25.24	25.5

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

Table 11-20 LTE700-FDD71 #1

LTE700-FDD71 #1									
BandWidth	RB No./Start	Channel	Tune-up	Measured Power (dBm) & MPR					
				QPSK		16QAM		64QAM	
				Measured Power	MPR	Measured Power	MPR	Measured Power	MPR
5MHz	1H	133447	24.5	22.86	0	21.80	1	21.45	2
		133297	24.5	22.87	0	22.11	1	21.46	2
		133147	24.5	22.88	0	21.91	1	21.42	2
	1M	133447	24.5	22.85	0	21.75	1	21.49	2
		133297	24.5	22.82	0	22.08	1	21.45	2
		133147	24.5	22.86	0	21.87	1	21.35	2
	1L	133447	24.5	22.84	0	21.73	1	21.44	2
		133297	24.5	22.86	0	22.12	1	21.47	2
		133147	24.5	22.85	0	21.86	1	21.41	2
	12H	133447	24.5	21.86	1	20.93	2	20.41	3
		133297	24.5	21.82	1	20.92	2	20.28	3
		133147	24.5	21.87	1	20.88	2	20.25	3
	12M	133447	24.5	21.94	1	20.96	2	20.39	3
		133297	24.5	21.87	1	20.99	2	20.34	3
		133147	24.5	21.89	1	20.92	2	20.27	3
	12L	133447	24.5	21.85	1	20.94	2	20.38	3
		133297	24.5	21.84	1	20.95	2	20.35	3
		133147	24.5	21.86	1	20.86	2	20.29	3
	25	133447	24.5	21.89	1	20.94	2	20.37	3
		133297	24.5	21.83	1	20.81	2	20.33	3
		133147	24.5	21.85	1	20.87	2	20.32	3
10MHz	1H	132422	24.5	22.88	0	22.47	1	21.45	2
		133297	24.5	22.86	0	21.97	1	21.42	2
		133172	24.5	22.87	0	22.38	1	21.34	2
	1M	132422	24.5	23.01	0	22.57	1	21.52	2
		133297	24.5	22.94	0	22.11	1	21.47	2
		133172	24.5	23.03	0	22.49	1	21.44	2
	1L	132422	24.5	22.79	0	22.35	1	21.43	2
		133297	24.5	22.79	0	21.92	1	21.48	2
		133172	24.5	22.85	0	22.29	1	21.43	2
	25H	132422	24.5	22.00	1	20.97	2	20.45	3
		133297	24.5	21.82	1	20.83	2	20.30	3
		133172	24.5	21.86	1	20.88	2	20.31	3
	25M	132422	24.5	22.01	1	21.01	2	20.42	3
		133297	24.5	21.89	1	20.86	2	20.34	3
		133172	24.5	21.87	1	20.89	2	20.36	3
	25L	132422	24.5	21.97	1	20.98	2	20.43	3
		133297	24.5	21.86	1	20.88	2	20.40	3
		133172	24.5	21.89	1	20.90	2	20.34	3
	50	132422	24.5	22.00	1	21.01	2	20.44	3
		133297	24.5	21.85	1	20.91	2	20.35	3
		133172	24.5	21.85	1	20.83	2	20.24	3
15MHz	1H	133397	24.5	22.83	0	22.17	1	21.46	2
		133297	24.5	22.87	0	22.23	1	21.42	2
		133197	24.5	22.85	0	22.19	1	21.48	2
	1M	133397	24.5	22.86	0	22.20	1	21.45	2
		133297	24.5	22.85	0	22.18	1	21.48	2
		133197	24.5	22.81	0	22.15	1	21.44	2
	1L	133397	24.5	22.81	0	22.06	1	21.42	2
		133297	24.5	22.82	0	22.17	1	21.44	2
		133197	24.5	22.79	0	22.13	1	21.36	2
	36H	133397	24.5	21.97	1	20.89	2	20.41	3
		133297	24.5	21.85	1	20.86	2	20.29	3
		133197	24.5	21.89	1	20.89	2	20.31	3
	36M	133397	24.5	21.91	1	20.82	2	20.32	3
		133297	24.5	21.89	1	20.86	2	20.33	3
		133197	24.5	21.97	1	20.84	2	20.30	3
	36L	133397	24.5	21.96	1	20.87	2	20.37	3
		133297	24.5	21.82	1	20.72	2	20.28	3
		133197	24.5	21.95	1	20.78	2	20.35	3
	75	133397	24.5	21.97	1	20.89	2	20.35	3
		133297	24.5	21.89	1	20.81	2	20.24	3
		133197	24.5	21.93	1	20.83	2	20.31	3

20MHz	1H	133372	24.5	22.93	0	22.17	1	21.25	2
		133297	24.5	22.85	0	22.46	1	21.46	2
		133222	24.5	22.88	0	22.07	1	21.38	2
	1M	133372	24.5	22.98	0	22.25	1	21.12	2
		133297	24.5	22.83	0	22.51	1	21.44	2
		133222	24.5	23.01	0	22.17	1	21.40	2
	1L	133372	24.5	22.78	0	22.09	1	21.34	2
		133297	24.5	22.81	0	22.29	1	21.47	2
		133222	24.5	22.82	0	21.92	1	21.31	2
	50H	133372	24.5	21.88	1	20.86	2	20.28	3
		133297	24.5	21.93	1	20.98	2	20.30	3
		133222	24.5	21.96	1	20.98	2	20.31	3
	50M	133372	24.5	21.94	1	20.93	2	20.30	3
		133297	24.5	21.91	1	20.97	2	20.34	3
		133222	24.5	21.87	1	20.95	2	20.28	3
	50L	133372	24.5	21.79	1	20.78	2	20.23	3
		133297	24.5	21.94	1	21.01	2	20.24	3
		133222	24.5	21.88	1	20.89	2	20.26	3
	100	133372	24.5	21.84	1	20.85	2	20.29	3
		133297	24.5	21.96	1	20.92	2	20.25	3
		133222	24.5	21.93	1	20.94	2	20.27	3

11.5 Wi-Fi and BT Measurement result

The output power of BT antenna is as following:

Table 11-21 Bluetooth Power

Bluetooth Power				
Mode	Channel	Frequency	Tune-up	Measured
GFSK	78	2480 MHz	8.5	7.95
	39	2441 MHz	8.5	8.05
	0	2402 MHz	8.5	7.26
EDR2M-4_DQPSK	78	2480 MHz	8.5	7.31
	39	2441 MHz	8.5	7.38
	0	2402 MHz	8.5	6.63
EDR3M-8DPSK	78	2480 MHz	8.5	7.35
	39	2441 MHz	8.5	7.61
	0	2402 MHz	8.5	6.68

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

Table 11-22 WLAN2450 #1 Receiver OFF

WLAN2450 #1 Normal						
Band	Mode	Channel	Frequency	Data Rate	Tune-up	Measured
WLAN 2.4G 20M	802.11b	11	2462 MHz	1Mbps	20.00	19.41
		6	2437 MHz		20.00	19.57
		1	2412 MHz		20.00	19.49
		11	2462 MHz	2Mbps	/	/
		6	2437 MHz		20.00	19.53
		1	2412 MHz		/	/
		11	2462 MHz	5.5Mbps	20.00	19.55
		6	2437 MHz		20.00	19.74
		1	2412 MHz		20.00	19.64
		11	2462 MHz	11Mbps	/	/
		6	2437 MHz		20.00	19.48
		1	2412 MHz		/	/
	802.11g	11	2462 MHz	6Mbps	17.00	15.74
		6	2437 MHz		19.50	18.37
		1	2412 MHz		19.50	18.24
		11	2462 MHz	9Mbps	/	/
		6	2437 MHz		19.50	18.36
		1	2412 MHz		/	/
		11	2462 MHz	12Mbps	/	/
		6	2437 MHz		19.50	18.36
		1	2412 MHz		/	/
		11	2462 MHz	18Mbps	/	/
		6	2437 MHz		19.00	17.71
		1	2412 MHz		/	/
		11	2462 MHz	24Mbps	/	/
		6	2437 MHz		18.50	17.27
		1	2412 MHz		/	/
		11	2462 MHz	36Mbps	/	/
		6	2437 MHz		18.50	17.26
		1	2412 MHz		/	/
		11	2462 MHz	48Mbps	/	/
		6	2437 MHz		18.00	16.88
		1	2412 MHz		/	/
		11	2462 MHz	54Mbps	/	/
		6	2437 MHz		18.00	16.89
		1	2412 MHz		/	/
	802.11n 20M	11	2462 MHz	MCS0	17.00	15.72
		6	2437 MHz		19.50	18.31
		1	2412 MHz		19.50	18.15
		11	2462 MHz	MCS1	/	/
		6	2437 MHz		19.50	18.10
		1	2412 MHz		/	/
		11	2462 MHz	MCS2	/	/
		6	2437 MHz		19.50	18.11
		1	2412 MHz		/	/
		11	2462 MHz	MCS3	/	/
		6	2437 MHz		18.50	17.23
		1	2412 MHz		/	/
		11	2462 MHz	MCS4	/	/
		6	2437 MHz		18.50	17.20
		1	2412 MHz		/	/
		11	2462 MHz	MCS5	/	/
		6	2437 MHz		18.00	16.55
		1	2412 MHz		/	/
		11	2462 MHz	MCS6	/	/
		6	2437 MHz		18.00	16.56
		1	2412 MHz		/	/
		11	2462 MHz	MCS7	/	/
		6	2437 MHz		18.00	16.57
		1	2412 MHz		/	/

Table 11-23 WLAN2450 #2 Low Power Receiver ON

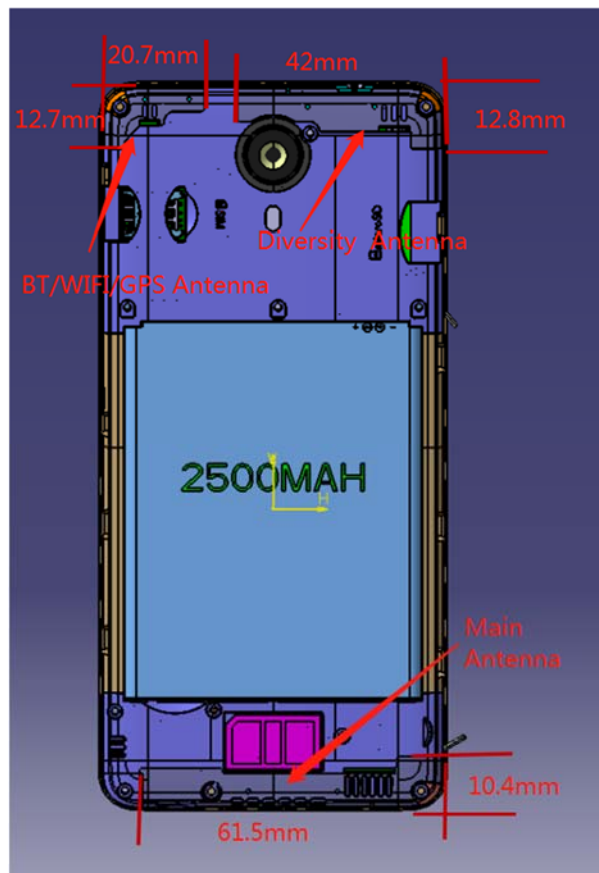
WLAN2450 #2 Low Power						
Band	Mode	Channel	Frequency	Data Rate	Tune-up	Measured
WLAN 2.4G 20M	802.11b	11	2462 MHz	1Mbps	17.00	16.36
		6	2437 MHz		17.00	16.49
		1	2412 MHz		17.00	16.39
		11	2462 MHz	2Mbps	/	/
		6	2437 MHz		17.00	16.41
		1	2412 MHz		/	/
		11	2462 MHz	5.5Mbps	/	/
		6	2437 MHz		17.00	16.47
		1	2412 MHz		/	/
		11	2462 MHz	11Mbps	/	/
		6	2437 MHz		17.00	16.44
		1	2412 MHz		/	/
	802.11g	11	2462 MHz	6Mbps	15.00	13.66
		6	2437 MHz		17.50	16.18
		1	2412 MHz		17.50	16.23
		11	2462 MHz	9Mbps	/	/
		6	2437 MHz		/	/
		1	2412 MHz		17.50	16.01
		11	2462 MHz	12Mbps	/	/
		6	2437 MHz		/	/
		1	2412 MHz		17.50	16.00
		11	2462 MHz	18Mbps	/	/
		6	2437 MHz		/	/
		1	2412 MHz		17.50	15.59
		11	2462 MHz	24Mbps	/	/
		6	2437 MHz		/	/
		1	2412 MHz		16.50	15.14
		11	2462 MHz	36Mbps	/	/
		6	2437 MHz		/	/
		1	2412 MHz		16.50	15.12
		11	2462 MHz	48Mbps	/	/
		6	2437 MHz		/	/
		1	2412 MHz		16.00	14.98
		11	2462 MHz	54Mbps	/	/
		6	2437 MHz		/	/
		1	2412 MHz		16.00	14.76
	802.11n 20M	11	2462 MHz	MCS0	15.00	13.40
		6	2437 MHz		17.50	16.14
		1	2412 MHz		17.50	15.88
		11	2462 MHz	MCS1	/	/
		6	2437 MHz		17.50	15.92
		1	2412 MHz		/	/
		11	2462 MHz	MCS2	/	/
		6	2437 MHz		17.50	15.91
		1	2412 MHz		/	/
		11	2462 MHz	MCS3	/	/
		6	2437 MHz		16.00	14.78
		1	2412 MHz		/	/
		11	2462 MHz	MCS4	/	/
		6	2437 MHz		16.00	14.76
		1	2412 MHz		/	/
		11	2462 MHz	MCS5	/	/
		6	2437 MHz		16.00	14.32
		1	2412 MHz		/	/
		11	2462 MHz	MCS6	/	/
		6	2437 MHz		15.50	14.34
		1	2412 MHz		/	/
		11	2462 MHz	MCS7	/	/
		6	2437 MHz		15.50	14.33
		1	2412 MHz		/	/

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 v02r01, 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
Main antenna	Yes	Yes	Yes	Yes	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:

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

- $f(\text{GHz})$ 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 threshold (mW)	RF output power		SAR test exclusion
				dBm	mW	
Bluetooth	2.441	Head	9.6	8.50	7.08	Yes
		Body	19.2	8.50	7.08	Yes
2.4GHz WLAN 802.11 b	2.45	Head	9.58	17.00	50.12	No
		Body	19.17	21.00	125.89	No

13 Evaluation of Simultaneous

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

	Position	Main antenna	WLAN 2.4G	Sum	Distance (mm)	Ratio
Maximum reported SAR value for Head	Left hand, Touch cheek (WCDMA1900)	0.68	0.91	1.59	/	/
Maximum reported SAR value for Body	Rear (CDMA BC1)	1.34	0.37	1.71	103.25	0.02
	Rear (LTE Band41 PC2)	0.31	0.37 (10mm)	0.68	/	/

According to the KDB 447498 D01, when the sum of SAR is larger than the limit, SAR test exclusion is determined by the SAR to peak location separation ratio. The ratio is determined by $(SAR1 + SAR2)^{1.5}/R_i$, rounded to two decimal digits, and must be ≤ 0.04 for all antenna pairs in the configuration to qualify for 1-g SAR test exclusion.

<input type="checkbox"/> Maxima and position w.r.t. Grid Reference Point	associated 1g averages
<input type="checkbox"/> Zoom Scan (F:\CDMA BC1 Body 04a.da53:0/Rear)	
Max. 1 at (47.80, 19.10, -0.90) mm	1.19 W/kg
<input type="checkbox"/> Zoom Scan (F:\WIFI 2.4G Body 04a.da53:0/Rear ch6 5.5M 21db)	
Max. 2 at (-48.40, -18.40, -0.59) mm	0.33 W/kg
<input type="checkbox"/> Distances and Separation Ratios	
Max. 1 - Max. 2	Distance [mm]: 103.25 / Separation ratio [W/kg/mm]: 0.02

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

	Position	Main antenna	BT	Sum
Maximum reported SAR value for Head	Left hand, Touch cheek (WCDMA1900)	0.68	0.05	0.73
Maximum reported SAR value for Body	Rear (CDMA BC1)	1.34	0.15	1.49
Maximum reported SAR value for Body	Rear (LTE Band41 PC2)	0.31	0.10	0.41

[1] - Estimated SAR for Bluetooth (see the table 13.3) Except Body SAR

Table 13.3: Estimated SAR for Bluetooth

Mode/Band	F (GHz)	Position	Distance (mm)	Upper limit of power *		Estimated _{1g} (W/kg)
				dBm	mW	
Bluetooth	2.441	Head	5	0.50	1.12	0.05
Bluetooth	2.441	Body	10	8.50	7.08	0.15
Bluetooth	2.441	Body	15	8.50	7.08	0.10

* - 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,

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mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 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 < 1.6 W/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 0/10/15mm and 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-g SAR is the highest measured SAR in each exposure configuration, wireless mode and frequency band combination or more than 1.2 W/kg.

The calculated SAR is obtained by the following formula:

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

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

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

Mode	Duty Cycle
Speech for GSM850/1900	1:8.3
GPRS&EGPRS for GSM850/1900	1:4
WCDMA<E	1:1

14.1 SAR results

Note: This product has two working power levels for WLAN and Cellular band LTE B41. WLAN shall work in low power level if audio receiver is active (Receiver ON), so we test the head SAR of WLAN with low power (Receiver ON) and test the body SAR with normal power (Receiver OFF).

For the frequency band of Hotspot power reduction (LTE B41), the power reduction mechanism of this project is: when the Hotspot is turned on, the power is lowered, and the power is normal when the Hotspot is turned off.

Head situation can work with both hotspot on and off, so the normal power can be measured for head SAR to obtain the maximum and most conservative SAR value.

When Hotspot is turned on, Body SAR is tested under 10mm with low power for hotspot mode according to the requirement of KDB 941225 D06.

When Hotspot is turned off, Body SAR is tested under 15mm with normal power for body-worn mode.

Table 14-1 GSM850 #1 Head

GSM850 #1 Head								
Ambient Temperature:			22.5			Liquid Temperature: 22.3		
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			CH251 848.8 MHz	CH190 836.6 MHz	CH128 824.2 MHz	CH251 848.8 MHz	CH190 836.6 MHz	CH128 824.2 MHz
GSM	Tune-up		34.00	34.00	34.00	Scaling factor*		
	Slot Average Power [dBm]		32.62	32.66	32.65	1.37	1.36	1.37
	Left Cheek	1g SAR	0.206	0.241	0.222	0.28	0.33	0.30
		10g SAR	0.163	0.187	0.174	0.22	0.25	0.24
		Deviation	0.02	-0.06	-0.06	0.02	-0.06	-0.06
	Left Tilt	1g SAR		0.155			0.21	
		10g SAR		0.123			0.17	
		Deviation		-0.08			-0.08	
	Right Cheek	1g SAR		0.225			0.31	
		10g SAR		0.17			0.23	
		Deviation		0.02			0.02	
	Right Tilt	1g SAR		0.159			0.22	
		10g SAR		0.122			0.17	
		Deviation		0.02			0.02	

Table 14-2 GSM850 #1 Body

GSM850 #1 Body								
Ambient Temperature:			22.5			Liquid Temperature: 22.3		
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			CH251 848.8 MHz	CH190 836.6 MHz	CH128 824.2 MHz	CH251 848.8 MHz	CH190 836.6 MHz	CH128 824.2 MHz
GPRS 2 Txslots	Tune-up		32.00	32.00	32.00	Scaling factor*		
	Slot Average Power [dBm]		31.21	31.22	31.19	1.20	1.20	1.21
	Front	1g SAR		0.214			0.26	
		10g SAR		0.172			0.21	
		Deviation		0.02			0.02	
	Rear	1g SAR	0.497	0.464	0.493	0.60	0.55	0.59
		10g SAR	0.392	0.373	0.393	0.47	0.45	0.47
		Deviation	-0.08	-0.06	0.13	-0.08	-0.06	0.13
	Left edge	1g SAR		0.234			0.28	
		10g SAR		0.166			0.20	
		Deviation		0.09			0.09	
	Right edge	1g SAR		0.079			0.09	
		10g SAR		0.043			0.05	
		Deviation		0.04			0.04	
	Bottom edge	1g SAR		0.143			0.17	
		10g SAR		0.088			0.11	
		Deviation		0.01			0.01	
EGPRS GMSK 2 Txslots	Tune-up		32.00	32.00	32.00	Scaling factor*		
	Slot Average Power [dBm]		31.22	31.23	31.20	1.20	1.19	1.20
	Rear	1g SAR	0.491			0.59		
		10g SAR	0.361			0.43		
		Deviation	0.02			0.02		

Table 14-3 PCS1900 #1 Head

PCS1900 #1 Head								
Ambient Temperature: 22.5					Liquid Temperature: 22.3			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			CH810 1909.8	CH661 1880 MHz	CH512 1850.2	CH810 1909.8	CH661 1880 MHz	CH512 1850.2
GSM	Tune-up		30.50	30.50	30.50	Scaling factor*		
	Slot Average Power [dBm]		29.76	29.61	29.40	1.19	1.23	1.29
	Left Cheek	1g SAR	0.338	0.347	0.338	0.40	0.43	0.44
		10g SAR	0.206	0.211	0.209	0.24	0.26	0.27
		Deviation	-0.04	0.05	0.12	-0.04	0.05	0.12
	Left Tilt	1g SAR		0.12			0.15	
		10g SAR		0.075			0.09	
		Deviation		-0.05			-0.05	
	Right Cheek	1g SAR		0.18			0.22	
		10g SAR		0.12			0.15	
		Deviation		0.08			0.08	
	Right Tilt	1g SAR		0.151			0.19	
		10g SAR		0.092			0.11	
		Deviation		-0.09			-0.09	

Table 14-4 PCS1900 #1 Body

PCS1900 #1 Body								
Ambient Temperature:			22.5			Liquid Temperature: 22.3		
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			CH810 1909.8	CH661 1880 MHz	CH512 1850.2	CH810 1909.8	CH661 1880 MHz	CH512 1850.2
GPRS 2 Txslots	Tune-up		28.50	28.50	28.50	Scaling factor*		
	Slot Average Power [dBm]		28.35	28.11	28.11	1.04	1.09	1.09
	Front	1g SAR		0.572			0.63	
		10g SAR		0.345			0.38	
		Deviation		0.1			0.10	
	Rear	1g SAR	0.766	0.752	0.781	0.79	0.82	0.85
		10g SAR	0.443	0.43	0.47	0.46	0.47	0.51
		Deviation	-0.04	0.07	-0.09	-0.04	0.07	-0.09
	Left edge	1g SAR		0.264			0.29	
		10g SAR		0.165			0.18	
		Deviation		0.13			0.13	
	Right edge	1g SAR		0.123			0.13	
		10g SAR		0.076			0.08	
		Deviation		-0.06			-0.06	
	Bottom edge	1g SAR		0.703			0.77	
		10g SAR		0.388			0.42	
		Deviation		0.05			0.05	
EGPRS GMSK 2 Txslots	Tune-up		28.50	28.50	28.50	Scaling factor*		
	Slot Average Power [dBm]		28.14	28.11	28.11	1.09	1.09	1.09
	Bottom edge	1g SAR			0.722			0.79
		10g SAR			0.39			0.43
		Deviation			0.01			0.01

Table 14-5 WCDMA1900-BII #1Head

WCDMA1900-BII #1Head								
Ambient Temperature: 22.5					Liquid Temperature: 22.3			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			CH9538 1907.6 MHz	CH9400 1880 MHz	CH9262 1852.4 MHz	CH9538 1907.6 MHz	CH9400 1880 MHz	CH9262 1852.4 MHz
RMC	Tune-up		24.00	24.00	24.00	Scaling factor*		
	Slot Average Power [dBm]		22.91	22.83	22.78	1.29	1.31	1.32
	Left Cheek	1g SAR	0.488	0.519	0.511	0.63	0.68	0.68
		10g SAR	0.302	0.319	0.318	0.39	0.42	0.42
		Deviation	0.03	0.17	0.07	0.03	0.17	0.07
	Left Tilt	1g SAR		0.208			0.27	
		10g SAR		0.134			0.18	
		Deviation		-0.06			-0.06	
	Right Cheek	1g SAR		0.256			0.34	
		10g SAR		0.172			0.23	
		Deviation		0.1			0.10	
	Right Tilt	1g SAR		0.226			0.30	
		10g SAR		0.14			0.18	
		Deviation		-0.09			-0.09	

Table 14-6 WCDMA1900-BII #1Body

WCDMA1900-BII #1Body								
Ambient Temperature:			22.5			Liquid Temperature: 22.3		
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			CH9538 1907.6 MHz	CH9400 1880 MHz	CH9262 1852.4 MHz	CH9538 1907.6 MHz	CH9400 1880 MHz	CH9262 1852.4 MHz
RMC	Tune-up		24.00	24.00	24.00	Scaling factor*		
	Slot Average Power [dBm]		22.91	22.83	22.78	1.29	1.31	1.32
	Front	1g SAR		0.546			0.71	
		10g SAR		0.344			0.45	
		Deviation		0.05			0.05	
	Rear	1g SAR	0.711	0.726	0.386	0.91	0.95	0.51
		10g SAR	0.424	0.444	0.198	0.54	0.58	0.26
		Deviation	-0.02	0	0.1	-0.02	0.00	0.10
	Left edge	1g SAR		0.322			0.42	
		10g SAR		0.203			0.27	
		Deviation		0.14			0.14	
	Right edge	1g SAR		0.135			0.18	
		10g SAR		0.092			0.12	
		Deviation		-0.07			-0.07	
	Bottom edge	1g SAR		0.579			0.76	
		10g SAR		0.262			0.34	
		Deviation		-0.05			-0.05	

Table 14-7 WCDMA1700-BIV #1Head

WCDMA1700-BIV #1Head								
Ambient Temperature: 22.5					Liquid Temperature: 22.3			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			CH1513 1752.6 MHz	CH1412 1732.4 MHz	CH1312 1712.4 MHz	CH1513 1752.6 MHz	CH1412 1732.4 MHz	CH1312 1712.4 MHz
RMC	Tune-up		24.00	24.00	24.00	Scaling factor*		
	Slot Average Power [dBm]		22.95	22.91	22.98	1.27	1.29	1.26
	Left Cheek	1g SAR	0.453	0.354	0.403	0.58	0.45	0.51
		10g SAR	0.287	0.23	0.261	0.37	0.30	0.33
		Deviation	0.11	0.07	0.02	0.11	0.07	0.02
	Left Tilt	1g SAR		0.077			0.10	
		10g SAR		0.052			0.07	
		Deviation		0.09			0.09	
	Right Cheek	1g SAR		0.256			0.33	
		10g SAR		0.164			0.21	
		Deviation		0.13			0.13	
	Right Tilt	1g SAR		0.056			0.07	
		10g SAR		0.039			0.05	
		Deviation		-0.03			-0.03	

Table 14-8 WCDMA1700-BIV #1Body

WCDMA1700-BIV #1Body								
Ambient Temperature: 22.5					Liquid Temperature: 22.3			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			CH1513 1752.6 MHz	CH1412 1732.4 MHz	CH1312 1712.4 MHz	CH1513 1752.6 MHz	CH1412 1732.4 MHz	CH1312 1712.4 MHz
RMC	Tune-up		24.00	24.00	24.00	Scaling factor*		
	Slot Average Power [dBm]		22.95	22.91	22.98	1.27	1.29	1.26
	Front	1g SAR		0.507			0.65	
		10g SAR		0.316			0.41	
		Deviation		0.01			0.01	
	Rear	1g SAR	0.826	0.731	0.804	1.05	0.94	1.02
		10g SAR	0.496	0.437	0.484	0.63	0.56	0.61
		Deviation	0.03	-0.1	0.06	0.03	-0.10	0.06
	Left edge	1g SAR		0.316			0.41	
		10g SAR		0.194			0.25	
		Deviation		0.02			0.02	
	Right edge	1g SAR		0.244			0.31	
		10g SAR		0.099			0.13	
		Deviation		-0.09			-0.09	
	Bottom edge	1g SAR		0.165			0.21	
		10g SAR		0.1			0.13	
		Deviation		0.14			0.14	

Table 14-9 WCDMA850-BV #1Head

WCDMA850-BV #1Head								
Ambient Temperature: 22.5					Liquid Temperature: 22.3			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			CH4233 846.6 MHz	CH4182 835.4 MHz	CH4132 826.4 MHz	CH4233 846.6 MHz	CH4182 835.4 MHz	CH4132 826.4 MHz
RMC	Tune-up		24.50	24.50	24.50	Scaling factor*		
	Slot Average Power [dBm]		23.17	23.10	23.15	1.36	1.38	1.36
	Left Cheek	1g SAR		0.277			0.38	
		10g SAR		0.211			0.29	
		Deviation		0.02			0.02	
	Left Tilt	1g SAR		0.18			0.25	
		10g SAR		0.137			0.19	
		Deviation		-0.08			-0.08	
	Right Cheek	1g SAR	0.297	0.286	0.243	0.40	0.39	0.33
		10g SAR	0.224	0.212	0.179	0.30	0.29	0.24
		Deviation	-0.17	-0.03	0.06	-0.17	-0.03	0.06
	Right Tilt	1g SAR		0.15			0.21	
		10g SAR		0.115			0.16	
		Deviation		0.12			0.12	

Table 14-10 WCDMA850-BV #1Body

WCDMA850-BV #1Body								
Ambient Temperature: 22.5					Liquid Temperature: 22.3			
Mode	Device orientation	SAR measurement	Measured SAR [W/kg]			Reported SAR [W/kg]		
			CH4233	CH4182	CH4132	CH4233	CH4182	CH4132
			846.6 MHz	835.4 MHz	826.4 MHz	846.6 MHz	835.4 MHz	826.4 MHz
RMC	Tune-up		24.50	24.50	24.50	Scaling factor*		
	Slot Average Power [dBm]		23.17	23.10	23.15	1.36	1.38	1.36
	Front	1g SAR		0.236			0.33	
		10g SAR		0.189			0.26	
		Deviation		0.01			0.01	
	Rear	1g SAR	0.321	0.331	0.255	0.44	0.46	0.35
		10g SAR	0.255	0.261	0.143	0.35	0.36	0.20
		Deviation	-0.03	0.06	-0.08	-0.03	0.06	-0.08
	Left edge	1g SAR		0.197			0.27	
		10g SAR		0.144			0.20	
		Deviation		0.12			0.12	
	Right edge	1g SAR		0.208			0.29	
		10g SAR		0.153			0.21	
		Deviation		0.09			0.09	
	Bottom edge	1g SAR		0.117			0.16	
		10g SAR		0.076			0.10	
		Deviation		0.16			0.16	