	25RB (0)	1907.5	23.4	21.83	1	20.78	2
		1880	23.4	21.50	1	20.50	2
		1852.5	23.4	21.62	1	20.61	2
10 MHz	1RB High (49)	1905	23.4	22.90	0	22.32	1
		1880	23.4	22.51	0	21.52	1
		1855	23.4	22.57	0	22.14	1
	1RB Middle (24)	1905	23.4	22.81	0	22.28	1
		1880	23.4	22.56	0	21.55	1
		1855	23.4	22.63	0	22.19	1
	1RB Low (0)	1905	23.4	22.70	0	22.21	1
		1880	23.4	22.54	0	21.54	1
		1855	23.4	22.63	0	22.13	1
	25RB High (25)	1905	23.4	21.84	1	20.93	2
		1880	23.4	21.51	1	20.64	2
		1855	23.4	21.60	1	20.73	2
	25RB Middle (12)	1905	23.4	21.79	1	20.88	2
		1880	23.4	21.52	1	20.65	2
		1855	23.4	21.61	1	20.75	2
	25RB Low (0)	1905	23.4	21.77	1	20.87	2
		1880	23.4	21.49	1	20.64	2
		1855	23.4	21.62	1	20.78	2
	50RB (0)	1905	23.4	21.81	1	20.85	2
		1880	23.4	21.53	1	20.61	2
		1855	23.4	21.63	1	20.71	2
15 MHz	1RB High (74)	1902.5	23.4	23.01	0	22.40	1
		1880	23.4	22.59	0	21.96	1
		1857.5	23.4	22.61	0	22.17	1
	1RB Middle (37)	1902.5	23.4	22.85	0	22.34	1
		1880	23.4	22.57	0	21.91	1
		1857.5	23.4	22.62	0	22.17	1
	1RB Low (0)	1902.5	23.4	22.75	0	22.27	1
		1880	23.4	22.57	0	21.92	1
		1857.5	23.4	22.68	0	22.19	1
	36RB High (38)	1902.5	23.4	21.96	1	20.90	2
		1880	23.4	21.59	1	20.57	2
		1857.5	23.4	21.67	1	20.68	2
	36RB Middle (19)	1902.5	23.4	21.90	1	20.86	2
		1880	23.4	21.57	1	20.58	2
		1857.5	23.4	21.66	1	20.67	2
	36RB Low (0)	1902.5	23.4	21.85	1	20.78	2
		1880	23.4	21.56	1	20.55	2
		1857.5	23.4	21.69	1	20.69	2
	75RB (0)	1902.5	23.4	21.91	1	20.88	2
		1880	23.4	21.60	1	20.59	2
		1857.5	23.4	21.65	1	20.68	2
20 MHz	1RB High (99)	1900	23.4	23.06	0	22.27	1
		1880	23.4	22.62	0	22.18	1
		1860	23.4	22.68	0	21.93	1

	1RB Middle (50)	1900	23.4	22.85	0	22.11	1
		1880	23.4	22.54	0	22.04	1
		1860	23.4	22.61	0	21.94	1
	1RB Low (0)	1900	23.4	22.74	0	22.04	1
		1880	23.4	22.54	0	22.08	1
		1860	23.4	22.67	0	21.97	1
	50RB High (50)	1900	23.4	21.90	1	20.88	2
		1880	23.4	21.58	1	20.61	2
		1860	23.4	21.62	1	20.64	2
	50RB Middle (25)	1900	23.4	21.78	1	20.78	2
		1880	23.4	21.52	1	20.55	2
		1860	23.4	21.60	1	20.61	2
	50RB Low (0)	1900	23.4	21.75	1	20.74	2
		1880	23.4	21.54	1	20.54	2
		1860	23.4	21.61	1	20.64	2
	100RB (0)	1900	23.4	21.82	1	20.84	2
		1880	23.4	21.55	1	20.59	2
		1860	23.4	21.61	1	20.65	2
Band 4							
Bandwidth (MHz)	RB allocation / RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
1.4 MHz	1RB High (5)	1754.3	24.5	23.66	0	22.67	1
		1732.5	24.5	23.91	0	22.97	1
		1710.7	24.5	23.88	0	22.95	1
	1RB Middle (3)	1754.3	24.5	23.73	0	22.73	1
		1732.5	24.5	23.93	0	23.01	1
		1710.7	24.5	23.89	0	22.96	1
	1RB Low (0)	1754.3	24.5	23.71	0	22.69	1
		1732.5	24.5	23.92	0	22.92	1
		1710.7	24.5	23.85	0	22.90	1
	3RB High (3)	1754.3	24.5	23.71	0	22.73	1
		1732.5	24.5	23.99	0	23.04	1
		1710.7	24.5	23.95	0	23.09	1
	3RB Middle (1)	1754.3	24.5	23.64	0	22.65	1
		1732.5	24.5	23.90	0	22.95	1
		1710.7	24.5	23.86	0	23.07	1
	3RB Low (0)	1754.3	24.5	23.71	0	22.71	1
		1732.5	24.5	23.99	0	23.01	1
		1710.7	24.5	23.93	0	23.12	1
	6RB (0)	1754.3	24.5	22.78	1	21.86	2
		1732.5	24.5	22.99	1	22.11	2
		1710.7	24.5	22.93	1	22.10	2
3 MHz	1RB High (14)	1753.5	24.5	23.65	0	23.05	1
		1732.5	24.5	23.91	0	22.99	1

		1711.5	24.5	23.86	0	23.36	1
	1RB Middle (7)	1753.5	24.5	23.71	0	23.12	1
		1732.5	24.5	23.96	0	23.00	1
		1711.5	24.5	23.88	0	23.41	1
	1RB Low (0)	1753.5	24.5	23.71	0	23.13	1
		1732.5	24.5	23.93	0	23.01	1
		1711.5	24.5	23.85	0	23.38	1
	8RB High (7)	1753.5	24.5	22.81	1	21.80	2
		1732.5	24.5	23.03	1	22.11	2
		1711.5	24.5	23.03	1	22.01	2
	8RB Middle (4)	1753.5	24.5	22.84	1	21.83	2
		1732.5	24.5	23.07	1	22.15	2
		1711.5	24.5	23.02	1	22.04	2
	8RB Low (0)	1753.5	24.5	22.83	1	21.83	2
		1732.5	24.5	23.07	1	22.14	2
		1711.5	24.5	23.03	1	22.03	2
	15RB (0)	1753.5	24.5	22.78	1	21.71	2
		1732.5	24.5	23.02	1	22.03	2
		1711.5	24.5	22.98	1	21.91	2
5 MHz	1RB High (24)	1752.5	24.5	23.66	0	22.57	1
		1732.5	24.5	23.92	0	22.88	1
		1712.5	24.5	23.88	0	22.84	1
	1RB Middle (12)	1752.5	24.5	23.75	0	22.65	1
		1732.5	24.5	23.97	0	22.92	1
		1712.5	24.5	23.91	0	22.86	1
	1RB Low (0)	1752.5	24.5	23.77	0	22.67	1
		1732.5	24.5	23.96	0	22.89	1
		1712.5	24.5	23.93	0	22.85	1
	12RB High (13)	1752.5	24.5	22.81	1	21.85	2
		1732.5	24.5	23.05	1	22.11	2
		1712.5	24.5	23.01	1	22.06	2
	12RB Middle (6)	1752.5	24.5	22.85	1	21.88	2
		1732.5	24.5	23.06	1	22.12	2
		1712.5	24.5	23.00	1	22.06	2
	12RB Low (0)	1752.5	24.5	22.87	1	21.91	2
		1732.5	24.5	23.06	1	22.12	2
		1712.5	24.5	23.02	1	22.06	2
	25RB (0)	1752.5	24.5	22.79	1	21.72	2
		1732.5	24.5	23.02	1	22.00	2
		1712.5	24.5	22.97	1	21.92	2
10 MHz	1RB High (49)	1750	24.5	23.78	0	23.17	1
		1732.5	24.5	24.00	0	23.07	1

		1715	24.5	23.95	0	23.43	1
	1RB Middle (24)	1750	24.5	23.89	0	23.31	1
		1732.5	24.5	24.01	0	23.30	1
		1715	24.5	23.93	0	23.50	1
	1RB Low (0)	1750	24.5	23.86	0	23.37	1
		1732.5	24.5	23.85	0	22.76	1
		1715	24.5	23.89	0	23.46	1
	25RB High (25)	1750	24.5	22.81	1	21.80	2
		1732.5	24.5	23.02	1	22.02	2
		1715	24.5	22.97	1	22.05	2
	25RB Middle (12)	1750	24.5	22.81	1	21.84	2
		1732.5	24.5	22.99	1	22.02	2
		1715	24.5	22.96	1	22.04	2
	25RB Low (0)	1750	24.5	22.89	1	21.87	2
		1732.5	24.5	22.98	1	21.98	2
		1715	24.5	22.95	1	22.03	2
	50RB (0)	1750	24.5	22.83	1	21.81	2
		1732.5	24.5	23.02	1	22.00	2
		1715	24.5	22.98	1	22.00	2
15 MHz	1RB High (74)	1747.5	24.5	23.80	0	23.18	1
		1732.5	24.5	24.01	0	23.35	1
		1717.5	24.5	24.01	0	23.33	1
	1RB Middle (37)	1747.5	24.5	23.85	0	23.34	1
		1732.5	24.5	24.00	0	23.37	1
		1717.5	24.5	23.97	0	23.30	1
	1RB Low (0)	1747.5	24.5	23.97	0	23.48	1
		1732.5	24.5	23.99	0	23.31	1
		1717.5	24.5	23.95	0	23.30	1
	36RB High (38)	1747.5	24.5	22.93	1	21.87	2
		1732.5	24.5	23.12	1	22.06	2
		1717.5	24.5	23.08	1	22.00	2
	36RB Middle (19)	1747.5	24.5	22.97	1	21.91	2
		1732.5	24.5	23.08	1	22.02	2
		1717.5	24.5	23.06	1	21.98	2
	36RB Low (0)	1747.5	24.5	23.00	1	21.96	2
		1732.5	24.5	23.09	1	22.01	2
		1717.5	24.5	23.04	1	21.97	2
	75RB (0)	1747.5	24.5	23.00	1	21.95	2
		1732.5	24.5	23.08	1	22.03	2
		1717.5	24.5	23.07	1	22.01	2
20 MHz	1RB High (99)	1745	24.5	23.87	0	23.05	1
		1732.5	24.5	23.95	0	23.50	1
		1720	24.5	23.85	0	23.50	1
	1RB Middle (50)	1745	24.5	23.91	0	23.22	1
		1732.5	24.5	23.95	0	23.50	1
		1720	24.5	23.86	0	23.44	1

	1RB Low (0)	1745	24.5	24.08	0	23.39	1
		1732.5	24.5	23.96	0	23.50	1
		1720	24.5	23.87	0	23.40	1
	50RB High (50)	1745	24.5	22.83	1	21.77	2
		1732.5	24.5	23.04	1	22.01	2
		1720	24.5	23.03	1	21.99	2
	50RB Middle (25)	1745	24.5	22.83	1	21.83	2
		1732.5	24.5	22.91	1	21.98	2
		1720	24.5	22.98	1	21.95	2
	50RB Low (0)	1745	24.5	22.81	1	21.71	2
		1732.5	24.5	23.01	1	21.97	2
		1720	24.5	22.94	1	21.92	2
	100RB (0)	1745	24.5	22.91	1	22.05	2
		1732.5	24.5	23.10	1	21.99	2
		1720	24.5	22.96	1	21.95	2
Band 7							
Bandwidth (MHz)	RB allocation / RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
5 MHz	1RB High (24)	2567.5	23	22.43	0	21.36	1
		2535	23	22.25	0	21.17	1
		2502.5	23	21.75	0	20.65	1
	1RB Middle (12)	2567.5	23	22.45	0	21.33	1
		2535	23	22.29	0	21.19	1
		2502.5	23	21.57	0	20.45	1
	1RB Low (0)	2567.5	23	22.36	0	21.27	1
		2535	23	22.24	0	21.14	1
		2502.5	23	21.41	0	20.32	1
	12RB High (13)	2567.5	23	21.34	1	20.44	2
		2535	23	21.25	1	20.32	2
		2502.5	23	20.29	1	19.83	2
	12RB Middle (6)	2567.5	23	21.35	1	20.43	2
		2535	23	21.22	1	20.30	2
		2502.5	23	20.18	1	19.29	2
	12RB Low (0)	2567.5	23	21.32	1	20.40	2
		2535	23	21.20	1	20.28	2
		2502.5	23	20.21	1	19.23	2
	25RB (0)	2567.5	23	21.29	1	20.28	2
		2535	23	21.15	1	20.12	2
		2502.5	23	20.00	1	19.20	2
10 MHz	1RB High (49)	2565	23	22.31	0	21.82	1
		2535	23	22.26	0	21.25	1
		2505	23	21.75	0	21.22	1
	1RB Middle	2565	23	22.22	0	21.75	1
		2535	23	22.23	0	21.22	1

	(24)	2505	23	21.49	0	21.00	1
	1RB Low (0)	2565	23	22.20	0	21.68	1
		2535	23	22.15	0	21.12	1
		2505	23	21.25	0	20.83	1
	25RB High (25)	2565	23	21.29	1	20.43	2
		2535	23	21.25	1	20.36	2
		2505	23	20.58	1	19.71	2
	25RB Middle (12)	2565	23	21.19	1	20.34	2
		2535	23	21.21	1	20.34	2
		2505	23	20.47	1	19.58	2
	25RB Low (0)	2565	23	21.17	1	20.28	2
		2535	23	21.14	1	20.27	2
		2505	23	20.30	1	19.42	2
	50RB (0)	2565	23	21.22	1	20.30	2
		2535	23	21.19	1	20.27	2
		2505	23	20.45	1	19.51	2
15 MHz	1RB High (74)	2562.5	23	22.45	0	21.93	1
		2535	23	22.34	0	21.66	1
		2507.5	23	21.90	0	21.40	1
	1RB Middle (37)	2562.5	23	22.31	0	21.79	1
		2535	23	22.25	0	21.57	1
		2507.5	23	21.50	0	21.00	1
	1RB Low (0)	2562.5	23	22.32	0	21.80	1
		2535	23	22.15	0	21.47	1
		2507.5	23	21.09	0	20.66	1
	36RB High (38)	2562.5	23	21.43	1	20.44	2
		2535	23	21.35	1	20.32	2
		2507.5	23	20.55	1	19.68	2
	36RB Middle (19)	2562.5	23	21.37	1	20.36	2
		2535	23	21.28	1	20.26	2
		2507.5	23	20.49	1	19.48	2
	36RB Low (0)	2562.5	23	21.36	1	20.34	2
		2535	23	21.23	1	20.21	2
		2507.5	23	20.32	1	19.31	2
	75RB (0)	2562.5	23	21.41	1	20.43	2
		2535	23	21.26	1	20.27	2
		2507.5	23	20.52	1	19.52	2
20 MHz	1RB High (99)	2560	23	22.52	0	21.74	1
		2535	23	22.32	0	21.81	1
		2510	23	22.07	0	21.31	1
	1RB Middle (50)	2560	23	22.38	0	21.65	1
		2535	23	22.25	0	21.74	1
		2510	23	21.64	0	20.90	1
	1RB Low (0)	2560	23	22.44	0	21.67	1
		2535	23	22.09	0	21.60	1
		2510	23	21.23	0	20.47	1

	50RB High (50)	2560	23	21.37	1	20.37	2
		2535	23	21.23	1	20.27	2
		2510	23	20.54	1	19.80	2
	50RB Middle (25)	2560	23	21.48	1	20.41	2
		2535	23	21.24	1	20.22	2
		2510	23	20.55	1	19.57	2
	50RB Low (0)	2560	23	21.35	1	20.33	2
		2535	23	21.15	1	20.17	2
		2510	23	20.29	1	19.31	2
	100RB (0)	2560	23	21.29	1	20.36	2
		2535	23	21.19	1	20.24	2
		2510	23	20.56	1	19.59	2
Band 13							
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
5 MHz	1RB High (24)	784.5	24	22.67	0	21.66	1
		782	24	22.68	0	21.67	1
		779.5	24	22.66	0	21.65	1
	1RB Middle (12)	784.5	24	22.75	0	21.72	1
		782	24	22.73	0	21.69	1
		779.5	24	22.75	0	21.70	1
	1RB Low (0)	784.5	24	22.72	0	21.69	1
		782	24	22.70	0	21.67	1
		779.5	24	22.74	0	21.70	1
	12RB High (13)	784.5	24	21.87	1	20.95	2
		782	24	21.82	1	20.89	2
		779.5	24	21.85	1	20.94	2
	12RB Middle (6)	784.5	24	21.86	1	20.95	2
		782	24	21.81	1	20.92	2
		779.5	24	21.87	1	20.95	2
	12RB Low (0)	784.5	24	21.85	1	20.95	2
		782	24	21.82	1	20.93	2
		779.5	24	21.85	1	20.94	2
	25RB (0)	784.5	24	21.80	1	20.78	2
		782	24	21.76	1	20.75	2
		779.5	24	21.80	1	20.78	2
10 MHz	1RB High (49)	782	24	22.74	0	21.82	1

	1RB Middle (24)	782	24	22.75	0	21.82	1
	1RB Low (0)	782	24	22.80	0	21.84	1
	25RB High (25)	782	24	21.80	1	20.94	2
	25RB Middle (12)	782	24	21.79	1	20.90	2
	25RB Low (0)	782	24	21.78	1	20.91	2
	50RB (0)	782	24	21.83	1	20.90	2
Band 17							
Bandwidth (MHz)	RB allocation / RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
5 MHz	1RB High (24)	713.5	24	22.63	0	21.60	1
		710	24	22.65	0	21.58	1
		706.5	24	23.06	0	21.60	1
	1RB Middle (12)	713.5	24	22.68	0	21.66	1
		710	24	22.74	0	21.65	1
		706.5	24	22.79	0	21.66	1
	1RB Low (0)	713.5	24	22.68	0	21.66	1
		710	24	22.76	0	21.63	1
		706.5	24	22.78	0	21.67	1
	12RB High (13)	713.5	24	21.82	1	20.91	2
		710	24	21.80	1	20.91	2
		706.5	24	21.85	1	20.95	2
	12RB Middle (6)	713.5	24	21.81	1	20.92	2
		710	24	21.80	1	20.93	2
		706.5	24	21.84	1	20.94	2
	12RB Low (0)	713.5	24	21.82	1	20.93	2
		710	24	21.81	1	20.92	2
		706.5	24	21.86	1	20.96	2
	25RB (0)	713.5	24	21.76	1	20.77	2
		710	24	21.76	1	20.76	2
		706.5	24	21.80	1	20.79	2
10 MHz	1RB High (49)	711	24	22.65	0	22.20	1
		710	24	22.66	0	21.76	1
		709	24	22.63	0	22.27	1
	1RB Middle (24)	711	24	22.74	0	22.30	1
		710	24	22.80	0	21.81	1
		709	24	22.76	0	22.28	1
	1RB	711	24	22.81	0	22.24	1

	Low (0)	710	24	22.82	0	21.80	1
		709	24	22.81	0	22.28	1
	25RB High (25)	711	24	21.75	1	20.90	2
		710	24	21.77	1	20.93	2
		709	24	21.78	1	20.94	2
	25RB Middle (12)	711	24	21.74	1	20.91	2
		710	24	21.76	1	20.92	2
		709	24	21.77	1	20.92	2
	25RB Low (0)	711	24	21.74	1	20.93	2
		710	24	21.76	1	20.93	2
		709	24	21.77	1	20.92	2
	50RB (0)	711	24	21.80	1	20.89	2
		710	24	21.79	1	20.89	2
		709	24	21.81	1	20.92	2

Band 5

Bandwidth (MHz)	RB allocation	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
	RB offset (Start RB)			Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
1.4 MHz	1RB High (5)	848.3	24	23.29	0	22.07	1
		836.5	24	23.28	0	22.15	1
		824.7	24	23.34	0	22.20	1
	1RB Middle (3)	848.3	24	23.37	0	22.10	1
		836.5	24	23.37	0	22.21	1
		824.7	24	23.44	0	22.26	1
	1RB Low (0)	848.3	24	23.24	0	22.02	1
		836.5	24	23.26	0	22.14	1
		824.7	24	23.34	0	22.18	1
	3RB High (3)	848.3	24	23.05	0	22.08	1
		836.5	24	23.15	0	22.21	1
		824.7	24	23.22	0	22.28	1
	3RB Middle (1)	848.3	24	23.03	0	22.05	1
		836.5	24	23.11	0	22.19	1
		824.7	24	23.15	0	22.24	1
	3RB Low (0)	848.3	24	23.04	0	22.07	1
		836.5	24	23.11	0	22.19	1
		824.7	24	23.19	0	22.26	1
	6RB (0)	848.3	24	22.20	1	21.18	2
		836.5	24	22.21	1	21.26	2
		824.7	24	22.27	1	21.33	2
3 MHz	1RB High (14)	847.5	24	23.20	0	22.32	1
		836.5	24	23.21	0	22.06	1

		825.5	24	23.25	0	22.15	1
	1RB Middle (7)	847.5	24	23.26	0	22.40	1
		836.5	24	23.27	0	22.12	1
		825.5	24	23.33	0	22.20	1
	1RB Low (0)	847.5	24	23.15	0	22.37	1
		836.5	24	23.21	0	22.11	1
		825.5	24	23.26	0	22.14	1
	8RB High (7)	847.5	24	22.21	1	21.14	2
		836.5	24	22.23	1	21.18	2
		825.5	24	22.31	1	21.28	2
	8RB Middle (4)	847.5	24	22.20	1	21.15	2
		836.5	24	22.24	1	21.21	2
		825.5	24	22.30	1	21.27	2
	8RB Low (0)	847.5	24	22.20	1	21.12	2
		836.5	24	22.23	1	21.21	2
		825.5	24	22.29	1	21.26	2
	15RB (0)	847.5	24	22.09	1	20.98	2
		836.5	24	22.15	1	21.07	2
		825.5	24	22.20	1	21.13	2
5 MHz	1RB High (24)	846.5	24	23.07	0	21.83	1
		836.5	24	23.23	0	22.14	1
		826.5	24	23.25	0	22.22	1
	1RB Middle (12)	846.5	24	23.11	0	21.87	1
		836.5	24	23.25	0	22.18	1
		826.5	24	23.28	0	22.24	1
	1RB Low (0)	846.5	24	23.10	0	21.86	1
		836.5	24	23.23	0	22.19	1
		826.5	24	23.28	0	22.23	1
	12RB High (13)	846.5	24	22.09	1	21.15	2
		836.5	24	22.18	1	21.18	2
		826.5	24	22.25	1	21.27	2
	12RB Middle (6)	846.5	24	22.09	1	21.15	2
		836.5	24	22.20	1	21.20	2
		826.5	24	22.26	1	21.26	2
	12RB Low (0)	846.5	24	22.09	1	21.15	2
		836.5	24	22.22	1	21.23	2
		826.5	24	22.26	1	21.26	2
	25RB (0)	846.5	24	22.04	1	21.03	2
		836.5	24	22.14	1	21.05	2
		826.5	24	22.21	1	21.12	2
10 MHz	1RB High (49)	844.0	24	23.22	0	22.33	1
		836.5	24	23.30	0	22.07	1

		829.0	24	23.24	0	22.58	1
	1RB Middle (24)	844.0	24	23.23	0	22.40	1
		836.5	24	23.30	0	22.16	1
		829.0	24	23.27	0	22.63	1
	1RB Low (0)	844.0	24	23.28	0	22.39	1
		836.5	24	23.26	0	22.21	1
		829.0	24	23.34	0	22.62	1
	25RB High (25)	844.0	24	22.04	1	21.07	2
		836.5	24	22.15	1	21.17	2
		829.0	24	22.21	1	21.26	2
	25RB Middle (12)	844.0	24	22.04	1	21.09	2
		836.5	24	22.17	1	21.21	2
		829.0	24	22.20	1	21.28	2
	25RB Low (0)	844.0	24	22.06	1	21.08	2
		836.5	24	22.18	1	21.23	2
		829.0	24	22.22	1	21.30	2
	50RB (0)	844.0	24	22.03	1	21.23	2
		836.5	24	22.15	1	21.15	2
		829.0	24	22.21	1	21.22	2

11.5 Wi-Fi and BT Measurement result

The output power of BT antenna is as following:

Mode	Conducted Power (dBm)		
	Channel 0 (2402MHz)	Channel 39 (2441MHz)	Channel 78 (2480MHz)
GFSK	5.88	7.61	6.72
EDR2M-4_DQPSK	5.07	6.60	5.60
EDR3M-8DPSK	5.36	7.05	5.40

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

802.11b (dBm)

Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1	19.22	\	18.95	\
6	19.70	19.82	19.92	19.42
11	19.30	\	19.39	\

802.11g (dBm)

Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1	16.05	\	\	\	\	\	\	\

6	16.63	16.56	16.47	16.39	16.34	15.81	15.99	15.94
11	16.22	\	\	\	\	\	\	\

802.11n (dBm) - HT20 (2.4G)

Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
1	15.04	\	\	\	\	\	\	\
6	15.65	15.49	15.39	15.30	15.17	15.08	15.03	14.95
11	14.82	\	\	\	\	\	\	\

802.11n (dBm) – HT40 (2.4G)

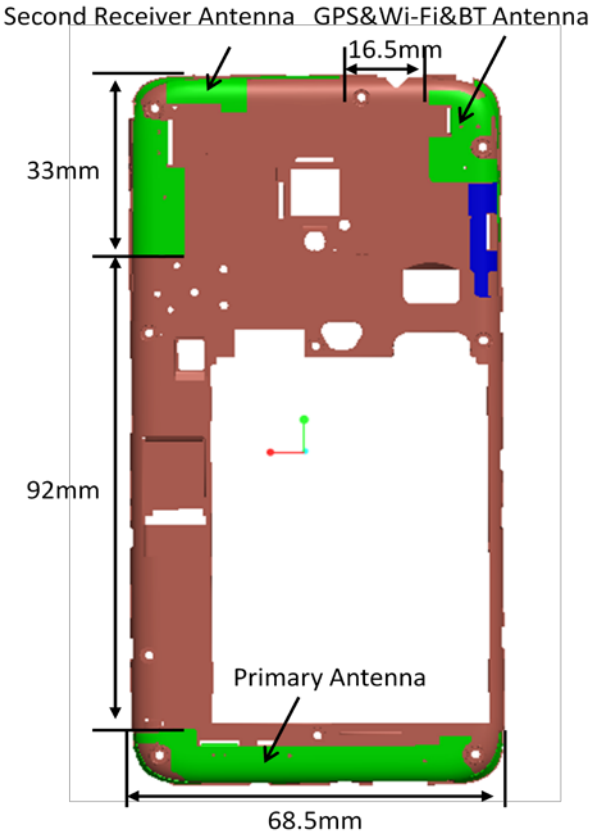
Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
3	14.40	\	\	\	\	\	\	\
6	14.53	14.38	14.06	13.92	13.72	13.51	13.20	12.11
9	14.11	\	\	\	\	\	\	\

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
Main antenna	Yes	Yes	Yes	Yes	No	Yes
WLAN	Yes	Yes	Yes	No	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)] · [√f(GHz)] ≤ 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 threshold (mW)	RF output power		SAR test exclusion
				dBm	mW	
Bluetooth	2.441	Head	9.60	8.5	7.08	Yes
		Body	19.20	8.5	7.08	Yes
2.4GHz WLAN 802.11 b	2.45	Head	9.58	20	100	No
		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 SAR value for Head	Right hand, Touch cheek	0.52	0.12	**0.64**
Highest reported SAR value for Body	Rear	1.28	0.30	**1.58**
	Bottom	1.35	/	**1.35**

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	Right hand, Touch cheek	0.52	0.29[1]	**0.81**
Maximum reported SAR value for Body	Rear	1.28	0.15[1]	**1.43**
	Bottom	1.35	0.15[1]	**1.50**

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

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	8.5	7.08	0.29
Bluetooth	2.441	Body	10	8.5	7.08	0.15

* - 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)]·[√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<1.6W/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 10mm 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 1.2W/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.

Table 14.1: Duty Cycle

Mode	Duty Cycle
Speech for GSM850/1900	1:8.3
GPRS&EGPRS for 850	1:8.3
GPRS&EGPRS for 1900	1:2
WCDMA&LTE	1:1

14.1 The evaluation of multi-batteries

We'll perform the head measurement in all bands with the primary battery depending on the evaluation of multi-batteries and retest on highest value point with other batteries. Then, repeat the measurement in the Body test.

Table 14.1-1: The evaluation of multi-batteries for Head Test

Frequency		Mode/Band	Side	Test Position	Battery Type	SAR(1g)	Power Drift(dB)
MHz	Ch.					(W/kg)	
836.6	190	GSM 850	Left	Touch	CAB2000010C1	0.246	0.13
836.6	190	GSM 850	Left	Touch	CAB2000041C7	0.229	-0.09
836.6	190	GSM 850	Left	Touch	CAB2000013C2	0.238	-0.09

Note: According to the values in the above table, the battery, CAB2000010C1, is the primary battery. We'll perform the head measurement with this battery and retest on highest value point with others.

Table 14.1-2: The evaluation of multi-batteries for Body Test

Frequency		Mode/Band	Test Position	Spacing (mm)	Battery Type	SAR(1g)	Power Drift(dB)
MHz	Ch.					(W/kg)	
836.6	190	GSM 850	Rear	10	CAB2000010C1	0.320	-0.03
836.6	190	GSM 850	Rear	10	CAB2000041C7	0.305	-0.06
836.6	190	GSM 850	Rear	10	CAB2000013C2	0.311	-0.05

Note: According to the values in the above table, the battery, CAB2000010C1, is the primary battery. We'll perform the Body measurement with this battery and retest on highest value point with others.

14.2 SAR results for Fast SAR

Table 14.2-1: SAR Values (GSM 850 MHz Band - Head)

Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C									
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
848.8	251	Left	Touch	/	32.25	33.3	0.137	**0.17**	0.206	**0.26**	0.02
836.6	190	Left	Touch	/	32.24	33.3	0.162	**0.21**	0.246	**0.31**	0.04
824.2	128	Left	Touch	Fig.1	32.25	33.3	0.217	**0.28**	0.284	**0.36**	0.10
836.6	190	Left	Tilt	/	32.24	33.3	0.145	**0.19**	0.211	**0.27**	-0.06
836.6	190	Right	Touch	/	32.24	33.3	0.156	**0.20**	0.228	**0.29**	0.01
836.6	190	Right	Tilt	/	32.24	33.3	0.133	**0.17**	0.191	**0.24**	0.03

Table 14.2-2: SAR Values (GSM 850 MHz Band - Body)

Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C									
Frequency		Mode (number of timeslots)	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
836.6	190	GPRS (1)	Front	/	32.26	32.3	0.167	**0.17**	0.235	**0.24**	-0.14
848.8	251	GPRS (1)	Rear	/	32.25	32.3	0.192	**0.19**	0.274	**0.28**	-0.08
836.6	190	GPRS (1)	Rear	/	32.26	32.3	0.247	**0.25**	0.32	**0.32**	-0.01
824.2	128	GPRS (1)	Rear	Fig.2	32.27	32.3	0.301	**0.30**	0.387	**0.39**	-0.01
836.6	190	GPRS (1)	Left	/	32.26	32.3	0.199	**0.20**	0.296	**0.30**	0.02
836.6	190	GPRS (1)	Right	/	32.26	32.3	0.184	**0.19**	0.275	**0.28**	-0.03
836.6	190	GPRS (1)	Bottom	/	32.26	32.3	0.0411	**0.04**	0.0645	**0.07**	-0.04
824.2	128	EGPRS (1)	Rear	/	32.29	32.3	0.3	**0.30**	0.385	**0.39**	0.03

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

Table 14.2-3: SAR Values (GSM 1900 MHz Band - Head)

Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C									
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
1880	661	Left	Touch	/	29.54	30.3	0.048	**0.06**	0.082	**0.10**	0.11
1880	661	Left	Tilt	/	29.54	30.3	0.02	**0.02**	0.046	**0.05**	0.09
1909.8	810	Right	Touch	/	29.58	30.3	0.048	**0.06**	0.085	**0.10**	0.11
1880	661	Right	Touch	/	29.54	30.3	0.056	**0.07**	0.099	**0.12**	0.12
1850.2	512	Right	Touch	Fig.3	29.65	30.3	0.0738	**0.09**	0.117	**0.14**	-0.03
1880	661	Right	Tilt	/	29.54	30.3	0.02	**0.02**	0.038	**0.05**	-0.04

Table 14.2-4: SAR Values (GSM 1900 MHz Band - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C											
Frequency		Mode (number of timeslots)	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
1880	661	GPRS (4)	Front	/	24.24	25	0.229	**0.27**	0.434	**0.52**	0.11
1909.8	810	GPRS (4)	Rear	/	24.21	25	0.292	**0.35**	0.593	**0.71**	-0.03
1880	661	GPRS (4)	Rear	/	24.24	25	0.426	**0.51**	0.85	**1.01**	0.02
1850.2	512	GPRS (4)	Rear	Fig.4	24.48	25	0.546	**0.62**	1.03	**1.16**	-0.03
1880	661	GPRS (4)	Left	/	24.24	25	0.038	**0.05**	0.066	**0.08**	-0.01
1880	661	GPRS (4)	Right	/	24.24	25	0.02	**0.02**	0.035	**0.04**	0.03
1909.8	810	GPRS (4)	Bottom	/	24.21	25	0.271	**0.32**	0.598	**0.72**	0.09
1880	661	GPRS (4)	Bottom	/	24.24	25	0.4	**0.48**	0.817	**0.97**	0.08
1850.2	512	GPRS (4)	Bottom	/	24.48	25	0.452	**0.51**	0.905	**1.02**	0.09
1850.2	512	EGPRS (4)	Rear	/	24.49	25	0.48	**0.54**	0.921	**1.04**	-0.14

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

Table 14.2-5: SAR Values (WCDMA 850 MHz Band - Head)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C											
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
846.6	4233	Left	Touch	Fig.5	23.32	24	0.222	**0.26**	0.29	**0.34**	0.14
836.4	4182	Left	Touch	/	23.32	24	0.174	**0.20**	0.261	**0.31**	0.08
826.4	4132	Left	Touch	/	23.27	24	0.162	**0.19**	0.243	**0.29**	0.01
836.4	4182	Left	Tilt	/	23.32	24	0.171	**0.20**	0.218	**0.25**	-0.04
836.4	4182	Right	Touch	/	23.32	24	0.171	**0.20**	0.25	**0.29**	-0.03
836.4	4182	Right	Tilt	/	23.32	24	0.153	**0.18**	0.226	**0.26**	0.06

Table 14.2-6: SAR Values (WCDMA 850 MHz Band - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.									
836.4	4182	Front	/	23.32	24	0.167	**0.20**	0.226	**0.26**	0.03
846.6	4233	Rear	Fig.6	23.32	24	0.309	**0.36**	0.398	**0.47**	-0.01
836.4	4182	Rear	/	23.32	24	0.251	**0.29**	0.357	**0.42**	-0.18
826.4	4132	Rear	/	23.27	24	0.196	**0.23**	0.268	**0.32**	0.19
836.4	4182	Left	/	23.32	24	0.162	**0.19**	0.243	**0.28**	0.06
836.4	4182	Right	/	23.32	24	0.179	**0.21**	0.266	**0.31**	0.17
836.4	4182	Bottom	/	23.32	24	0.0427	**0.05**	0.067	**0.08**	-0.02

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

Table 14.2-7: SAR Values (WCDMA 1900 MHz Band - Head)

Ambient Temperature: 22.9 °C					Liquid Temperature: 22.5 °C						
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
1880	9400	Left	Touch	/	23.38	24	0.067	**0.08**	0.11	**0.13**	0.11
1880	9400	Left	Tilt	/	23.38	24	0.027	**0.03**	0.049	**0.06**	0.13
1907.6	9538	Right	Touch	Fig.7	23.11	24	0.107	**0.13**	0.171	**0.21**	0.12
1880	9400	Right	Touch	/	23.38	24	0.0829	**0.10**	0.143	**0.16**	0.11
1852.4	9262	Right	Touch	/	23.04	24	0.0793	**0.10**	0.136	**0.17**	0.14
1880	9400	Right	Tilt	/	23.38	24	0.03	**0.03**	0.055	**0.06**	0.01

Table 14.2-8: SAR Values (WCDMA 1900 MHz Band - Body)

Ambient Temperature: 22.9 °C					Liquid Temperature: 22.5 °C					
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.									
1880	9400	Front	/	23.38	24	0.232	**0.27**	0.426	**0.49**	-0.07
1907.6	9538	Rear	/	23.11	24	0.502	**0.62**	0.783	**0.96**	0.01
1880	9400	Rear	/	23.38	24	0.402	**0.46**	0.754	**0.87**	-0.12
1852.4	9262	Rear	/	23.04	24	0.394	**0.49**	0.742	**0.93**	0.04
1880	9400	Left	/	23.38	24	0.0221	**0.03**	0.0365	**0.04**	-0.12
1880	9400	Right	/	23.38	24	0.0556	**0.06**	0.0949	**0.11**	-0.04
1907.6	9538	Bottom	Fig.8	23.11	24	0.56	**0.69**	1.08	**1.33**	0.02
1880	9400	Bottom	/	23.38	24	0.414	**0.48**	0.838	**0.97**	0.01
1852.4	9262	Bottom	/	23.04	24	0.373	**0.47**	0.756	**0.94**	0.01
1907.6	9538	Bottom Headset1	/	23.11	24	0.42	**0.52**	0.822	**1.01**	0.12
1907.6	9538	Bottom Headset2	/	23.11	24	0.475	**0.58**	0.919	**1.13**	0.16

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The headset1 is CCB3160A11C4, the headset2 is CCB3160A11C1.

Table 14.2-9: SAR Values (LTE Band2 - Head)

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5 °C						
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.											
1900	19100	1RB_High	Left	Touch	/	23.06	23.4	0.092	**0.10**	0.126	**0.14**	0.12
1900	19100	1RB_High	Left	Tilt	/	23.06	23.4	0.042	**0.05**	0.083	**0.09**	0.09
1900	19100	1RB_High	Right	Touch	Fig.9	23.06	23.4	0.111	**0.12**	0.176	**0.19**	0.12

1900	19100	1RB_High	Right	Tilt	/	23.06	23.4	0.049	**0.05**	0.093	**0.10**	0.05
1900	19100	50RB_High	Left	Touch	/	21.90	22.4	0.078	**0.09**	0.11	**0.12**	-0.06
1900	19100	50RB_High	Left	Tilt	/	21.90	22.4	0.032	**0.04**	0.063	**0.07**	-0.03
1900	19100	50RB_High	Right	Touch	/	21.90	22.4	0.09	**0.10**	0.161	**0.18**	0.18
1900	19100	50RB_High	Right	Tilt	/	21.90	22.4	0.04	**0.04**	0.074	**0.08**	-0.06

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-10: SAR Values (LTE Band2 - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.										
1900	19100	1RB_High	Front	/	23.06	23.4	0.337	**0.36**	0.645	**0.70**	0.07
1900	19100	1RB_High	Rear	Fig.10	23.06	23.4	0.605	**0.65**	1.18	**1.28**	-0.13
1880	18900	1RB_High	Rear	/	22.62	23.4	0.486	**0.58**	0.976	**1.17**	0.01
1860	18700	1RB_High	Rear	/	22.68	23.4	0.473	**0.56**	0.904	**1.07**	-0.06
1900	19100	1RB_High	Left	/	23.06	23.4	0.026	**0.03**	0.049	**0.05**	0.12
1900	19100	1RB_High	Right	/	23.06	23.4	0.056	**0.06**	0.103	**0.11**	0.11
1900	19100	1RB_High	Bottom	/	23.06	23.4	0.521	**0.56**	1.03	**1.11**	-0.18
1880	18900	1RB_High	Bottom	/	22.62	23.4	0.404	**0.48**	0.816	**0.98**	-0.09
1860	18700	1RB_High	Bottom	/	22.68	23.4	0.387	**0.46**	0.751	**0.89**	-0.12
1900	19100	50RB_High	Front	/	21.90	22.4	0.259	**0.29**	0.5	**0.56**	0.08
1900	19100	50RB_High	Rear	/	21.90	22.4	0.481	**0.54**	0.966	**1.08**	0.11
1880	18900	50RB_High	Rear	/	21.58	22.4	0.43	**0.52**	0.831	**1.00**	-0.18
1860	18700	50RB_High	Rear	/	21.62	22.4	0.433	**0.52**	0.834	**1.00**	0.03
1900	19100	50RB_High	Left	/	21.90	22.4	0.017	**0.02**	0.025	**0.03**	-0.01
1900	19100	50RB_High	Right	/	21.90	22.4	0.056	**0.06**	0.102	**0.11**	-0.18
1900	19100	50RB_High	Bottom	/	21.90	22.4	0.395	**0.44**	0.785	**0.88**	0.19
1880	18900	50RB_High	Bottom	/	21.58	22.4	0.387	**0.47**	0.726	**0.88**	0.06
1860	18700	50RB_High	Bottom	/	21.62	22.4	0.341	**0.41**	0.702	**0.84**	0.17
1900	19100	100RB	Rear	/	21.82	22.4	0.347	**0.40**	0.666	**0.76**	-0.15
1900	19100	100RB	Bottom	/	21.82	22.4	0.366	**0.42**	0.685	**0.78**	-0.15
1900	19100	1RB_High	Rear Headset1	/	23.06	23.4	0.584	**0.63**	1.04	**1.12**	-0.04
1900	19100	1RB_High	Rear Headset2	/	23.06	23.4	0.57	**0.62**	1.01	**1.09**	-0.09

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

Note2: The LTE mode is QPSK_20MHz.

Note3: The headset1 is CCB3160A11C4, the headset2 is CCB3160A11C1.