

8 CONDUCTED RF OUPUT POWER

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8.1 GSM Output Power

GSM										
GSM850	ANT	Burst Average Power(dBm)			Tune-up Power(dBm)	Division Factors	Frame-Averaged power (dBm)			Tune-up Power(dBm)
Channel		128	190	251			128	190	251	
GPRS 1Slots	ANT0	29.25	29.63	29.52	31.00	9.19	20.13	20.39	20.35	21.81
GPRS 2Slots	ANT0	30.27	30.12	30.22	31.00	6.13	24.03	24.13	24.20	24.87
GPRS 3Slots	ANT0	28.20	28.28	28.36	30.00	4.42	23.82	23.99	23.90	25.58
GPRS 4Slots	ANT0	27.77	28.04	27.79	28.50	3.18	24.61	24.79	24.75	25.32
EGPRS 1Slots	ANT0	26.26	26.31	26.38	28.00	9.19	17.11	17.24	17.19	18.81
EGPRS 2Slots	ANT0	25.46	25.26	25.34	27.00	6.13	19.19	19.26	19.23	20.87
EGPRS 3Slots	ANT0	23.08	23.11	23.20	25.00	4.42	18.70	18.65	18.65	20.58
EGPRS 4Slots	ANT0	21.68	21.75	21.81	23.50	3.18	18.50	18.71	18.63	20.32
GSM										
GSM1900	ANT	Burst Average Power(dBm)			Tune-up Power(dBm)	Division Factors	Frame-Averaged power (dBm)			Tune-up Power(dBm)
Channel		512	661	810			128	190	251	
GPRS 1Slots	ANT0	26.07	26.13	26.14	26.50	9.19	16.88	16.94	16.95	17.31
GPRS 2Slots	ANT0	24.75	24.85	24.84	26.00	6.13	18.62	18.72	18.71	19.87
GPRS 3Slots	ANT0	23.64	23.76	23.77	24.00	4.42	19.22	19.34	19.35	19.58
GPRS 4Slots	ANT0	21.58	21.75	21.79	23.00	3.18	18.40	18.57	18.61	19.82
EGPRS 1Slots	ANT0	26.37	26.66	26.75	27.50	9.19	17.18	17.47	17.56	18.31
EGPRS 2Slots	ANT0	24.99	25.25	25.42	26.00	6.13	18.86	19.12	19.29	19.87
EGPRS 3Slots	ANT0	22.80	23.03	23.09	23.50	4.42	18.38	18.61	18.67	19.08
EGPRS 4Slots	ANT0	21.39	21.64	21.72	22.00	3.18	18.21	18.46	18.54	18.82

WCDMA					
WCDMA B2	ANT	Output power(dBm)			Tune-up Limit Power(dBm)
Channel		9262	9400	9538	
RMC	ANT0	19.69	19.71	19.88	20.00
HSDPA Subtest-1	ANT0	18.69	18.56	18.43	19.00
HSDPA Subtest-2	ANT0	18.72	18.61	18.58	19.00
HSDPA Subtest-3	ANT0	18.05	18.03	18.23	19.00
HSDPA Subtest-4	ANT0	18.01	18.02	18.10	19.00
HSUPA Subtest-1	ANT0	16.79	16.60	16.65	17.00
HSUPA Subtest-2	ANT0	16.65	16.62	16.77	17.00
HSUPA Subtest-3	ANT0	17.53	17.60	17.55	18.00
HSUPA Subtest-4	ANT0	16.16	16.12	16.25	17.00
HSUPA Subtest-5	ANT0	17.62	17.51	17.66	18.00

WCDMA					
WCDMA B5	ANT	Output power(dBm)			Tune-up Limit Power(dBm)
Channel		4132	4183	4233	
RMC	ANT0	23.34	23.35	23.37	25.00
HSDPA Subtest-1	ANT0	22.22	22.39	22.51	23.30
HSDPA Subtest-2	ANT0	22.25	22.36	22.43	23.50
HSDPA Subtest-3	ANT0	22.01	21.87	21.72	22.50
HSDPA Subtest-4	ANT0	21.63	21.83	21.63	23.00
HSUPA Subtest-1	ANT0	20.27	20.35	20.39	21.50
HSUPA Subtest-2	ANT0	20.59	20.39	20.48	21.50
HSUPA Subtest-3	ANT0	21.24	21.39	21.51	22.50
HSUPA Subtest-4	ANT0	19.99	19.88	19.76	20.50
HSUPA Subtest-5	ANT0	21.46	21.33	21.35	22.00

Band				LTE Bands			
Bandwidth (MHz)	Modulation	RB Size	RB offset	ANT	20407	20525	20643
1.4	QPSK	1	0	ANT0	23.50	23.31	23.49
1.4	QPSK	1	2	ANT0	23.43	23.51	23.58
1.4	QPSK	1	5	ANT0	23.44	23.35	23.52
1.4	QPSK	3	0	ANT0	23.32	23.59	23.35
1.4	QPSK	3	1	ANT0	23.44	23.33	23.54
1.4	QPSK	3	3	ANT0	23.49	23.41	23.28
1.4	QPSK	6	0	ANT0	22.41	22.58	22.35
1.4	16QAM	1	0	ANT0	22.21	22.30	22.83
1.4	16QAM	1	2	ANT0	22.68	22.37	22.89
1.4	16QAM	1	5	ANT0	22.29	22.34	22.61
1.4	16QAM	3	0	ANT0	22.59	22.48	22.48
1.4	16QAM	3	1	ANT0	22.66	22.52	22.43
1.4	16QAM	3	3	ANT0	22.47	22.60	22.54
1.4	16QAM	6	0	ANT0	21.60	21.51	21.53
1.4	64QAM	1	0	ANT0	21.15	21.23	21.66
1.4	64QAM	1	2	ANT0	21.48	21.59	21.93
1.4	64QAM	1	5	ANT0	21.40	21.28	21.86
1.4	64QAM	3	0	ANT0	21.45	21.46	21.38
1.4	64QAM	3	1	ANT0	21.78	21.48	21.44
1.4	64QAM	3	3	ANT0	21.55	21.42	21.42
1.4	64QAM	6	0	ANT0	20.56	20.31	20.48
1.4	256QAM	1	0	ANT0	18.04	18.14	18.79
1.4	256QAM	1	2	ANT0	18.50	18.63	19.03
1.4	256QAM	1	5	ANT0	18.37	18.16	18.77
1.4	256QAM	3	0	ANT0	18.32	18.48	18.24
1.4	256QAM	3	1	ANT0	18.86	18.52	18.55
1.4	256QAM	3	3	ANT0	18.55	18.52	18.36
1.4	256QAM	6	0	ANT0	18.67	18.36	18.62

Band				LTE Bands			
Bandwidth (MHz)	Modulation	RB Size	RB offset	ANT	20415	20525	20635
3	QPSK	1	0	ANT0	23.49	23.43	23.44
3	QPSK	1	7	ANT0	23.46	23.53	23.48
3	QPSK	1	14	ANT0	23.47	23.44	23.40
3	QPSK	8	0	ANT0	22.38	22.56	22.41
3	QPSK	8	3	ANT0	22.45	22.57	22.35
3	QPSK	8	7	ANT0	22.43	22.51	22.40
3	QPSK	15	0	ANT0	22.32	22.50	22.26
3	16QAM	1	0	ANT0	22.39	22.19	22.67
3	16QAM	1	7	ANT0	22.65	22.47	22.93
3	16QAM	1	14	ANT0	22.44	22.31	22.60
3	16QAM	8	0	ANT0	21.56	21.38	21.41
3	16QAM	8	3	ANT0	21.69	21.50	21.62
3	16QAM	8	7	ANT0	21.72	21.63	21.36
3	16QAM	15	0	ANT0	21.47	21.58	21.56
3	64QAM	1	0	ANT0	21.15	21.25	21.69
3	64QAM	1	7	ANT0	21.42	21.42	21.90
3	64QAM	1	14	ANT0	21.43	21.16	21.67
3	64QAM	8	0	ANT0	20.46	20.56	20.40
3	64QAM	8	3	ANT0	20.72	20.29	20.36
3	64QAM	8	7	ANT0	20.36	20.48	20.63
3	64QAM	15	0	ANT0	20.52	20.49	20.30
3	256QAM	1	0	ANT0	18.31	18.21	18.82
3	256QAM	1	7	ANT0	18.57	18.34	18.88
3	256QAM	1	14	ANT0	18.32	18.33	18.72
3	256QAM	8	0	ANT0	18.29	18.72	18.26
3	256QAM	8	3	ANT0	18.57	18.40	18.29
3	256QAM	8	7	ANT0	18.59	18.34	18.52
3	256QAM	15	0	ANT0	18.60	18.32	18.32

Band				LTE Bands			
Bandwidth (MHz)	Modulation	RB Size	RB offset	ANT	20425	20525	20625
5	QPSK	1	0	ANT0	23.38	23.52	23.50
5	QPSK	1	12	ANT0	23.29	23.51	23.44
5	QPSK	1	24	ANT0	23.38	23.43	23.48
5	QPSK	12	0	ANT0	22.38	22.60	22.56
5	QPSK	12	6	ANT0	22.33	22.44	22.52
5	QPSK	12	13	ANT0	22.54	22.55	22.37
5	QPSK	25	0	ANT0	22.29	22.31	22.35
5	16QAM	1	0	ANT0	22.27	22.44	22.78
5	16QAM	1	12	ANT0	22.56	22.28	22.79
5	16QAM	1	24	ANT0	22.40	22.45	22.57
5	16QAM	12	0	ANT0	21.46	21.59	21.59
5	16QAM	12	6	ANT0	21.60	21.62	21.54
5	16QAM	12	13	ANT0	21.69	21.43	21.51
5	16QAM	25	0	ANT0	21.48	21.40	21.45
5	64QAM	1	0	ANT0	21.16	21.27	21.75
5	64QAM	1	12	ANT0	21.60	21.45	21.84
5	64QAM	1	24	ANT0	21.47	21.16	21.69
5	64QAM	12	0	ANT0	20.41	20.56	20.47
5	64QAM	12	6	ANT0	20.75	20.30	20.51
5	64QAM	12	13	ANT0	20.61	20.40	20.53
5	64QAM	25	0	ANT0	20.62	20.43	20.45
5	256QAM	1	0	ANT0	18.22	18.27	18.77
5	256QAM	1	12	ANT0	18.55	18.56	18.88
5	256QAM	1	24	ANT0	18.42	18.36	18.77
5	256QAM	12	0	ANT0	18.45	18.65	18.47
5	256QAM	12	6	ANT0	18.55	18.30	18.28
5	256QAM	12	13	ANT0	18.56	18.36	18.50
5	256QAM	25	0	ANT0	18.46	18.36	18.24

Band				LTE Bands			
Bandwidth (MHz)	Modulation	RB Size	RB offset	ANT	20450	20525	20600
10	QPSK	1	0	ANT0	23.45	23.48	23.41
10	QPSK	1	24	ANT0	23.42	23.35	23.44
10	QPSK	1	49	ANT0	23.45	23.39	23.41
10	QPSK	25	0	ANT0	22.50	22.43	22.46
10	QPSK	25	12	ANT0	22.42	22.46	22.46
10	QPSK	25	25	ANT0	22.41	22.41	22.39
10	QPSK	50	0	ANT0	22.40	22.44	22.40
10	16QAM	1	0	ANT0	22.36	22.53	22.72
10	16QAM	1	24	ANT0	22.53	22.38	22.80
10	16QAM	1	49	ANT0	22.41	22.33	22.69
10	16QAM	25	0	ANT0	21.53	21.49	21.48
10	16QAM	25	12	ANT0	21.57	21.50	21.51
10	16QAM	25	25	ANT0	21.59	21.53	21.45
10	16QAM	50	0	ANT0	21.50	21.47	21.46
10	64QAM	1	0	ANT0	21.25	21.30	21.72
10	64QAM	1	24	ANT0	21.50	21.45	21.81
10	64QAM	1	49	ANT0	21.42	21.28	21.82
10	64QAM	25	0	ANT0	20.40	20.58	20.35
10	64QAM	25	12	ANT0	20.63	20.43	20.40
10	64QAM	25	25	ANT0	20.50	20.41	20.50
10	64QAM	50	0	ANT0	20.50	20.35	20.38
10	256QAM	1	0	ANT0	18.18	18.34	18.62
10	256QAM	1	24	ANT0	18.45	18.52	18.90
10	256QAM	1	49	ANT0	18.39	18.32	18.72
10	256QAM	25	0	ANT0	18.32	18.68	18.21
10	256QAM	25	12	ANT0	18.63	18.58	18.27
10	256QAM	25	25	ANT0	18.44	18.38	18.47
10	256QAM	50	0	ANT0	18.54	18.34	18.43

Band				LTE Band7				
Bandwidth (MHz)	Modulation	RB Size	RB offset	ANT	20775	21100	21425	Tune-up power(dBm)
5	QPSK	1	0	ANT0	18.85	18.91	18.88	20.00
5	QPSK	1	12	ANT0	18.82	18.87	18.87	20.00
5	QPSK	1	24	ANT0	18.61	18.33	18.32	20.00
5	QPSK	12	0	ANT0	17.98	17.92	17.78	19.00
5	QPSK	12	6	ANT0	17.95	17.91	17.96	19.00
5	QPSK	12	13	ANT0	17.78	17.87	17.88	19.00
5	QPSK	25	0	ANT0	17.94	17.95	17.89	19.00
5	16QAM	1	0	ANT0	18.30	18.21	18.01	19.00
5	16QAM	1	12	ANT0	18.37	18.55	18.33	19.00
5	16QAM	1	24	ANT0	17.97	18.05	18.07	19.00
5	16QAM	12	0	ANT0	16.72	17.03	16.79	18.00
5	16QAM	12	6	ANT0	16.79	16.77	16.99	18.00
5	16QAM	12	13	ANT0	17.01	16.79	16.90	18.00
5	16QAM	25	0	ANT0	16.75	16.76	16.83	18.00
5	64QAM	1	0	ANT0	17.20	17.06	17.05	18.00
5	64QAM	1	12	ANT0	17.56	17.47	17.68	18.00
5	64QAM	1	24	ANT0	17.12	17.25	17.19	18.00
5	64QAM	12	0	ANT0	16.12	16.05	16.06	17.00
5	64QAM	12	6	ANT0	15.96	16.08	16.04	17.00
5	64QAM	12	13	ANT0	16.05	15.95	15.84	17.00
5	64QAM	25	0	ANT0	16.06	16.10	15.78	17.00
5	256QAM	1	0	ANT0	14.24	14.07	14.16	15.00
5	256QAM	1	12	ANT0	14.57	14.71	14.64	15.00
5	256QAM	1	24	ANT0	14.26	14.24	14.29	15.00
5	256QAM	12	0	ANT0	14.09	13.99	14.01	15.00
5	256QAM	12	6	ANT0	13.94	13.97	14.30	15.00
5	256QAM	12	13	ANT0	13.89	13.96	13.64	15.00
5	256QAM	25	0	ANT0	14.26	13.92	13.83	15.00

Band				LTE Band7				
Bandwidth (MHz)	Modulation	RB Size	RB offset	ANT	20800	21100	21400	Tune-up power(dBm)
10	QPSK	1	0	ANT0	18.91	18.65	18.77	20.00
10	QPSK	1	24	ANT0	18.96	18.73	18.77	20.00
10	QPSK	1	48	ANT0	18.43	18.51	18.37	20.00
10	QPSK	25	0	ANT0	17.93	17.78	17.89	19.00
10	QPSK	25	12	ANT0	17.81	17.91	17.72	19.00
10	QPSK	25	25	ANT0	17.96	17.77	17.89	19.00
10	QPSK	50	0	ANT0	17.75	17.81	17.87	19.00
10	16QAM	1	0	ANT0	18.04	18.14	17.83	19.00
10	16QAM	1	24	ANT0	18.56	18.30	18.32	19.00
10	16QAM	1	48	ANT0	18.21	18.13	17.85	19.00
10	16QAM	25	0	ANT0	16.74	16.92	16.79	18.00
10	16QAM	25	12	ANT0	16.84	17.04	16.77	18.00
10	16QAM	25	25	ANT0	16.94	16.68	16.73	18.00
10	16QAM	50	0	ANT0	16.86	16.78	16.77	18.00
10	64QAM	1	0	ANT0	17.42	16.97	17.07	18.00
10	64QAM	1	24	ANT0	17.40	17.44	17.53	18.00
10	64QAM	1	48	ANT0	17.16	17.05	17.29	18.00
10	64QAM	25	0	ANT0	16.07	16.23	16.16	17.00
10	64QAM	25	12	ANT0	16.02	16.03	16.02	17.00
10	64QAM	25	25	ANT0	16.04	15.88	15.82	17.00
10	64QAM	50	0	ANT0	16.20	15.91	16.01	17.00
10	256QAM	1	0	ANT0	14.38	14.02	14.39	15.00
10	256QAM	1	24	ANT0	14.48	14.38	14.55	15.00
10	256QAM	1	48	ANT0	14.39	14.23	14.30	15.00
10	256QAM	25	0	ANT0	13.98	14.03	14.09	15.00
10	256QAM	25	12	ANT0	13.96	13.91	14.06	15.00
10	256QAM	25	25	ANT0	14.25	13.65	14.00	15.00
10	256QAM	50	0	ANT0	14.15	13.99	13.85	15.00

Band				LTE Band7				
Bandwidth (MHz)	Modulation	RB Size	RB offset	ANT	20825	21100	21375	Tune-up power(dBm)
15	QPSK	1	0	ANT0	18.74	18.86	18.79	20.00
15	QPSK	1	37	ANT0	18.71	18.87	18.65	20.00
15	QPSK	1	74	ANT0	18.47	18.42	18.31	20.00
15	QPSK	36	0	ANT0	17.76	17.87	18.00	19.00
15	QPSK	36	19	ANT0	17.92	17.75	17.76	19.00
15	QPSK	36	39	ANT0	17.74	17.82	17.87	19.00
15	QPSK	75	0	ANT0	17.90	17.81	17.90	19.00
15	16QAM	1	0	ANT0	18.11	18.02	17.88	19.00
15	16QAM	1	37	ANT0	18.38	18.32	18.47	19.00
15	16QAM	1	74	ANT0	18.09	18.19	18.10	19.00
15	16QAM	36	0	ANT0	16.80	16.83	16.67	18.00
15	16QAM	36	19	ANT0	16.96	16.81	16.75	18.00
15	16QAM	36	39	ANT0	16.78	16.83	16.81	18.00
15	16QAM	75	0	ANT0	16.92	16.97	16.74	18.00
15	64QAM	1	0	ANT0	17.20	16.97	17.25	18.00
15	64QAM	1	37	ANT0	17.69	17.55	17.43	18.00
15	64QAM	1	74	ANT0	17.27	17.17	17.29	18.00
15	64QAM	36	0	ANT0	15.91	16.04	16.09	17.00
15	64QAM	36	19	ANT0	15.92	15.90	16.10	17.00
15	64QAM	36	39	ANT0	16.04	15.83	15.99	17.00
15	64QAM	75	0	ANT0	16.11	16.10	16.04	17.00
15	256QAM	1	0	ANT0	14.41	14.04	14.12	15.00
15	256QAM	1	37	ANT0	14.43	14.65	14.62	15.00
15	256QAM	1	74	ANT0	14.40	14.17	14.50	15.00
15	256QAM	36	0	ANT0	14.17	14.22	14.14	15.00
15	256QAM	36	19	ANT0	14.04	14.09	13.94	15.00
15	256QAM	36	39	ANT0	14.16	13.70	13.79	15.00
15	256QAM	75	0	ANT0	14.22	14.08	13.78	15.00

Band				LTE Band7				
Bandwidth (MHz)	Modulation	RB Size	RB offset	ANT	20850	21100	21350	Tune-up power(dBm)
20	QPSK	1	0	ANT0	18.84	18.74	18.81	20.00
20	QPSK	1	49	ANT0	18.84	18.77	18.79	20.00
20	QPSK	1	99	ANT0	18.40	18.48	18.46	20.00
20	QPSK	50	0	ANT0	17.87	17.86	17.86	19.00
20	QPSK	50	25	ANT0	17.85	17.86	17.82	19.00
20	QPSK	50	50	ANT0	17.85	17.77	17.77	19.00
20	QPSK	100	0	ANT0	17.84	17.82	17.82	19.00
20	16QAM	1	0	ANT0	18.16	18.08	17.96	19.00
20	16QAM	1	49	ANT0	18.43	18.41	18.32	19.00
20	16QAM	1	99	ANT0	18.09	18.09	17.96	19.00
20	16QAM	50	0	ANT0	16.81	16.90	16.79	18.00
20	16QAM	50	25	ANT0	16.81	16.90	16.86	18.00
20	16QAM	50	50	ANT0	16.90	16.82	16.77	18.00
20	16QAM	100	0	ANT0	16.88	16.85	16.78	18.00
20	64QAM	1	0	ANT0	17.34	17.11	17.16	18.00
20	64QAM	1	49	ANT0	17.55	17.59	17.58	18.00
20	64QAM	1	99	ANT0	17.27	17.12	17.24	18.00
20	64QAM	50	0	ANT0	16.00	16.13	16.07	17.00
20	64QAM	50	25	ANT0	16.03	16.03	16.08	17.00
20	64QAM	50	50	ANT0	16.03	15.84	15.90	17.00
20	64QAM	100	0	ANT0	16.07	16.00	15.91	17.00
20	256QAM	1	0	ANT0	14.26	14.26	14.21	15.00
20	256QAM	1	49	ANT0	14.60	14.57	14.52	15.00
20	256QAM	1	99	ANT0	14.37	14.25	14.27	15.00
20	256QAM	50	0	ANT0	14.09	14.27	14.12	15.00
20	256QAM	50	25	ANT0	14.00	13.92	14.10	15.00
20	256QAM	50	50	ANT0	14.11	13.88	13.85	15.00
20	256QAM	100	0	ANT0	14.05	13.90	13.76	15.00

8.4 WIFI Output Power

test Mode	ANT	Modulation	Channel number	Fre.(MHz)	AV output power(dBm)	tune up power(dBm)	SAR Test
WIFI 2.4G	ANT1	11b	1	2412	13.60	14.00	No
			6	2437	13.88	14.00	Yes
			11	2462	13.40	14.00	No
	ANT1	11g	1	2412	13.41	14.00	No
			6	2437	13.54	14.00	No
			11	2462	13.56	14.00	No
	ANT1	11n-HT20	1	2412	13.19	14.00	No
			6	2437	13.57	14.00	No
			11	2462	13.19	14.00	No
	ANT1	11n-HT40	3	2422	13.11	13.50	No
			6	2437	13.05	13.50	No
			9	2452	13.32	13.50	No

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

1) SAR is measured for 2.4 GHz 802.11b DSSS using either a fixed test position or, when applicable, the initial test position procedure.

2) According KDB 247228, when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is < 1.2 W/kg, OFDM SAR test is not required.

Adjusted SAR = $0.525 \times (25.12\text{mW}/25.12\text{mW}) = 0.525 \text{ W/Kg}$, so 2.4G OFDM SAR test is not required.

test Mode	ANT	Modulation	Channel number	Fre. (MHz)	AV output power(dBm)	tune up power(dBm)	SAR Test
5.2G WIFI	ANT1	11a	36	5180	13.61	14.00	No
			44	5220	13.71	14.00	No
			48	5240	13.61	14.00	No
		11n20	36	5180	13.42	13.50	No
			44	5220	13.46	13.50	No
			48	5240	13.45	13.50	No
		11n40	38	5190	13.37	13.50	No
			46	5230	13.43	13.50	No
		11ac20	36	5180	13.16	13.50	No
			44	5220	13.16	13.50	No
			48	5240	13.05	13.50	No
		11ac40	38	5190	12.82	13.00	No
			46	5230	12.83	13.00	No
		11ac80	42	5210	12.72	13.00	No
			52	5260	13.64	14.00	No
5.3G WIFI	ANT1	11a	60	5300	13.61	14.00	No
			64	5320	13.66	14.00	Yes
			52	5260	13.47	13.50	No
		11n20	60	5300	13.48	13.50	No
			64	5320	13.44	13.50	No
			54	5270	13.39	13.50	No
		11n40	62	5310	13.42	13.50	No
			52	5260	13.07	13.50	No
		11ac20	60	5300	13.09	13.50	No
			64	5320	13.04	13.50	No
			54	5270	12.86	13.00	No
		11ac40	62	5310	12.79	13.00	No
			58	5290	12.75	13.00	No
		11ac80	100	5500	13.61	14.00	No
			116	5580	13.64	14.00	No
5.6G WIFI	ANT1	11a	140	5700	13.66	14.00	Yes
			100	5500	13.31	13.50	No
		11n20	116	5580	13.37	13.50	No
			140	5700	13.34	13.50	No
			102	5510	12.63	13.50	No
		11n40	118	5590	13.26	13.50	No
			134	5670	13.33	13.50	No
			100	5500	13.01	13.50	No
		11ac20	116	5580	13.06	13.50	No
			140	5700	13.04	13.50	No
			102	5510	12.67	13.00	No
		11ac40	118	5590	12.69	13.00	No
			134	5670	12.73	13.00	No
			106	5530	12.64	13.00	No
		11ac80	122	5610	12.63	13.00	No
			149	5745	13.59	14.00	No
5.8G WIFI	ANT1	11a	157	5785	13.64	14.00	Yes
			165	5825	13.64	14.00	No
			149	5745	13.12	13.50	No
		11n20	157	5785	13.13	13.50	No
			165	5825	13.09	13.50	No
			151	5755	13.21	13.50	No
		11n40	159	5795	13.33	13.50	No
			149	5745	13.13	13.50	No
			157	5785	13.04	13.50	No
		11ac20	165	5825	13.06	13.50	No
			151	5755	12.79	13.00	No
			159	5795	12.82	13.00	No
		11ac40	155	5775	12.77	13.00	No

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

1) When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.

2) The largest channel bandwidth configuration is selected among the multiple configurations in a frequency band with the same maximum tune-up output power.

3) When multiple transmission modes (802.11a/n/ac) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac.

8.5 Bluetooth

8.5.1 Bluetooth Output Power

BT

Bluetooth Output Power

Bluetooth							
test Mode	ANT	Modulation	Channel number	Fre.(MHz)	AV output power(dBm)	Tune up power(dBm)	SAR Test
BT	ANT1	DH5	0	2402	4.70	6.00	No
			39	2441	5.56	6.00	Yes
			78	2480	4.80	6.00	No
		2DH5	0	2402	1.07	2.50	No
			39	2441	1.88	2.50	No
			78	2480	1.19	2.50	No
		3DH5	0	2402	1.13	2.50	No
			39	2441	2.02	2.50	No
			78	2480	1.28	2.50	No
		BLE1M	0	2402	-1.92	-1.00	No
			19	2440	-1.16	-1.00	No
			39	2480	-1.90	-1.00	No
		BLE2M	1	2404	-1.82	-1.00	No
			19	2440	-1.14	-1.00	No
			38	2478	-1.69	-1.00	No

Note: Since bluetooth BR mode is the maximum output power mode, SAR measurements were performed with test software using DH5 modulation, and SAR measurement is not required for the EDR and LE. When the secondary mode is ≤ ¼ dB higher than the primary mode.

8.5.2 Bluetooth Duty Cycle

The Bluetooth-DH5 duty cycle is 76.88% as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 100%, therefore the actual duty cycle will be scaled up to 100% for Bluetooth reported SAR calculation.

