

Portable device

According to §15.247(e)(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to KDB447498 D01 General RF Exposure Guidance V05

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] * [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$
$$f(\text{GHz}) \text{ is the RF channel transmit frequency in GHz;}$$

Power and distance are rounded to the nearest mW and mm before calculation;

The result is rounded to one decimal place for comparison;

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

We use 5mm as separation distance to calculate.

Maximum measured transmitter power:

WIFI:

Test Channel	Frequency (MHz)	Power Setting	Duty Cycle Factor (dB)	Average Output Power (dBm)	Maximum Output Power(dBm)	LIMIT (dBm)	Verdict
802.11b							
1	2412	Default	0	9.11	9.11	30	PASS
6	2437	Default	0	9.23	9.23	30	PASS
11	2462	Default	0	9.35	9.35	30	PASS
802.11g							
1	2412	Default	0	8.12	8.12	30	PASS
6	2437	Default	0	8.36	8.36	30	PASS
11	2462	Default	0	8.52	8.52	30	PASS
802.11n HT20							
1	2412	Default	0	8.37	8.37	30	PASS
6	2437	Default	0	8.22	8.22	30	PASS
11	2462	Default	0	8.05	8.05	30	PASS
802.11n HT40							
3	2422	Default	0	7.25	7.25	30	PASS
6	2437	Default	0	7.31	7.31	30	PASS
9	2452	Default	0	7.48	7.48	30	PASS

EDR:

Test Channel	Frequency	Power Setting	Peak Output Power	LIMIT	Verdict
	(MHz)		(dBm)	(dBm)	
1Mbps					
0	2402	Default	3.09	30	PASS
39	2441	Default	4.254	30	PASS
78	2480	Default	3.076	30	PASS
2Mbps					
0	2402	Default	4.034	20.97	PASS
39	2441	Default	5.269	20.97	PASS
78	2480	Default	4.183	20.97	PASS
3Mbps					
0	2402	Default	4.396	20.97	PASS
39	2441	Default	5.671	20.97	PASS
78	2480	Default	4.676	20.97	PASS

BLE:

Test Channel	Frequency (MHz)	Power Setting	Peak Output Power (dBm)	LIMIT (dBm)	Verdict
1Mbps					
00	2402	Default	-4.788	30	PASS
19	2440	Default	-3.552	30	PASS
39	2480	Default	-5.106	30	PASS

Measurement Result

WiFi:

Modulation	Channel Freq. (GHz)	Conducted power (dBm)	Conducted power (mW)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Result calculation	1g SAR
802.11b	2.412	9.11	8.15	9±0.5	9.50	8.91	2.76834	3.00
	2.442	9.23	8.38	9±0.5	9.50	8.91	2.78550	3.00
	2.462	9.35	8.61	9±0.5	9.50	8.91	2.79688	3.00
802.11g	2.412	8.12	6.49	8±1	9.00	7.94	2.46728	3.00
	2.442	8.36	6.85	8±1	9.00	7.94	2.48258	3.00
	2.462	8.52	7.11	8±1	9.00	7.94	2.49272	3.00
802.11n(20MHz)	2.412	8.37	6.87	8±1	9.00	7.94	2.46728	3.00
	2.442	8.22	6.64	8±1	9.00	7.94	2.48258	3.00
	2.462	8.05	6.38	8±1	9.00	7.94	2.49272	3.00
802.11n(40MHz)	2.422	7.25	5.31	7±1	8.00	6.31	1.96389	3.00
	2.442	7.31	5.38	7±1	8.00	6.31	1.97198	3.00
	2.452	7.48	5.60	6±1	8.00	6.31	1.97601	3.00

EDR:

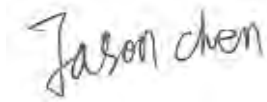
Modulation	Channel Freq. (MHz)	Conducted power (dBm)	Conducted power (mW)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Result calculation	1g SAR
GFSK	2.402	3.09	2.04	3.5±1	4.50	2.82	0.87361	3.00
	2.441	4.254	2.66	3.5±1	4.50	2.82	0.87995	3.00
	2.480	3.076	2.03	3.5±1	4.50	2.82	0.88768	3.00
$\pi/4$ -DQPSK	2.402	4.034	2.53	3.5±1	4.50	2.82	0.87361	3.00
	2.441	5.269	3.36	5±1	6.00	3.98	1.24398	3.00
	2.480	4.183	2.62	5±1	6.00	3.98	1.25388	3.00
8DPSK	2.402	4.396	2.75	5±1	6.00	3.98	1.23400	3.00
	2.441	5.671	3.69	5±1	6.00	3.98	1.24398	3.00
	2.480	4.676	2.93	5±1	6.00	3.98	1.25388	3.00

BLE:

Modulation	Channel Freq. (MHz)	Conducted power (dBm)	Conducted power (mW)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Result calculation	1g SAR
GFSK	2.402	-4.788	0.33	-4±1	-3.00	0.50	0.15535	3.00
	2.44	-3.552	0.44	-4±1	-3.00	0.50	0.15648	3.00
	2.480	-5.106	0.31	-5±1	-4.00	0.40	0.12539	3.00

Conclusion:

For the max result : $2.79688 \leq 3.0$ for 1-g SAR, No SAR is required.

A handwritten signature in black ink that reads "Jason chen". The signature is written in a cursive, slightly slanted style.**Signature:****Date:** 2016-12-20**NAME AND TITLE** (Please print or type): Jason Chen /Manager**COMPANY** (Please print or type): Shenzhen NTEK Testing Technology Co., Ltd./ 1/F, Building E,
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