

## RF EXPOSURE EVALUATION METHOD

FCC ID: 2AEMK-TVE1001I

### SAR Test Exclusion Thresholds for 100 MHz - 6 GHz and $\leq 50$ mm

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table.

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

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

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  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.

Maximum measured transmitter power.

WIFI:

TX 802.11b Mode				
Test Channel	Frequency	Maximum Conducted Output Power(PK)	Average Power(dBm)	Average Power(dBm)
	(MHz)	(dBm)	(dBm)	(mW)
CH01	2412	11.05	8.97	7.889
CH06	2437	11.67	9.46	8.831
CH11	2462	11.48	9.59	9.099
TX 802.11g Mode				
CH01	2412	10.04	7.78	5.998
CH06	2437	10.48	7.81	6.039
CH11	2462	10.37	7.73	5.929
TX 802.11n-HT20 Mode				
CH01	2412	8.97	6.33	4.295
CH06	2437	9.06	6.58	4.550
CH11	2462	8.91	6.18	4.150
TX 802.11a Mode				
CH149	5745	11.87	6.69	4.667
CH157	5785	11.59	6.37	4.335
CH165	5825	11.93	6.66	4.634
TX 802.11 n20 Mode				
CH149	5745	9.79	5.55	3.589
CH157	5785	9.06	5.73	3.741
CH165	5825	9.89	5.56	3.597

## BT

1Mbps			
Test Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power mW
CH00	2402	-2.761	0.530
CH39	2441	-1.899	0.646
CH78	2480	-1.703	0.676
2Mbps			
CH00	2402	-2.723	0.534
CH39	2441	-1.932	0.641
CH78	2480	-1.874	0.650
3Mbps			
CH00	2402	-2.692	0.538
CH39	2441	-1.916	0.643
CH78	2480	-1.897	0.646

## BLE

Test Channe	Frequency	Maximum Conducted Output Power(PK)	Maximum Conducted Output Power(PK)
	(MHz)	(dBm)	mW
CH00	2402	5.026	3.181
CH19	2440	5.586	3.619
CH39	2480	5.270	3.365

Remark: The best case gain of the antenna is 2.0dBi.

2.0 dBi logarithmic terms convert to numeric result is nearly 1.58

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

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance,mm})] \cdot [\sqrt{f(\text{GHz})}]$$

## WIFI:

Test Channel	Range	tune up max power (dBm)	[(max. power of channel, including tune-up tolerance, mW)	(min. test separation distance,mm)]	[f(GHz)]	Result	Limit
<b>TX 802. 11b Mode</b>							
CH01	7.6~9.6	9.6	9.120	5	2.412	2.83	3
CH06	7.6~9.6	9.6	9.120	5	2.437	2.85	3
CH11	7.6~9.6	9.6	9.120	5	2.462	2.86	3
<b>TX 802. 11g Mode</b>							
CH01	7.0~9.0	9.0	7.943	5	2.412	2.47	3
CH06	7.0~9.0	9.0	7.943	5	2.437	2.48	3
CH11	7.0~9.0	9.0	7.943	5	2.462	2.49	3
<b>TX 802. 11n-HT20 Mode</b>							
CH01	7.0~8.0	8.0	6.310	5	2.412	1.96	3
CH06	7.0~8.0	8.0	6.310	5	2.437	1.97	3
CH11	7.0~8.0	8.0	6.310	5	2.462	1.98	3
<b>TX 802. 11a Mode</b>							
CH149	5.0~7.0	7.0	5.012	5	5.745	2.40	3
CH157	5.0~7.0	7.0	5.012	5	5.785	2.41	3
CH165	5.0~7.0	7.0	5.012	5	5.825	2.42	3
<b>TX 802. 11 n20 Mode</b>							
CH149	5.0~7.0	7.0	5.012	5	5.745	2.40	3
CH157	5.0~7.0	7.0	5.012	5	5.785	2.41	3
CH165	5.0~7.0	7.0	5.012	5	5.825	2.42	3

## BT

Test Channel	Range	tune up max power (dBm)	[(max. power of channel, including tune-up tolerance, mW)	(min. test separation distance,mm)]	[f(GHz)]	Result	Limit
<b>1Mbps</b>							
CH00	-3~-1	-1	0.794	5	2.402	0.246	3
CH39	-3~-1	-1	0.794	5	2.441	0.248	3
CH78	-3~-1	-1	0.794	5	2.480	0.250	3
<b>2Mbps</b>							
CH00	-3~-1	-1	0.794	5	2.402	0.246	3
CH39	-3~-1	-1	0.794	5	2.441	0.248	3
CH78	-3~-1	-1	0.794	5	2.480	0.250	3
<b>3Mbps</b>							
CH00	-3~-1	-1	0.794	5	2.402	0.246	3
CH39	-3~-1	-1	0.794	5	2.441	0.248	3
CH78	-3~-1	-1	0.794	5	2.480	0.250	3

## BLE

Test Channel	Range	tune up max power (dBm)	[(max. power of channel, including tune-up tolerance, mW)	(min. test separation distance,mm)]	[f(GHz)]	Result	Limit
CH00	5.0~7.0	7.0	5.012	5	2.402	1.554	3
CH39	5.0~7.0	7.0	5.012	5	2.441	1.566	3
CH78	5.0~7.0	7.0	5.012	5	2.480	1.579	3

The test Result is less than 3.0 for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR.

**Conclusion:** No SAR is required.