

RF EXPOSURE EVALUATION METHOD

FCC ID:2AANF-I7HD SAR Test Exclusion Thresholds for 100 MHz $\,=\,$ 6 GHz and $\,\leqslant\,$ 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:

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

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.

Maximum measured transmitter power.

WIFI:

TX 802.11b Mode								
Test Channe	Frequency	Maximum Peak Conducted Output Power (PK)	Maximum Peak Conducted Output Power (AV)	Maximum Peak Conducted Output Power (AV)				
	(MHz)	(dBm)	(dBm)	mW				
CH01	2412	13.68	9.36	8.630				
CH06	2437	13.97	9.45	8.810				
CH11	2462	13.88	9.36	8.630				
		TX 802.11	g Mode					
CH01	2412	12.56	7.43	5.534				
CH06	2437	12.67	7.54	5.675				
CH11	2462	12.85	7.72	5.916				
	TX 802.11n(20) Mode							
CH01	2412	10.21	7.98	6.281				
CH06	2437	10.42	8.19	6.592				
CH11	2462	10.28	8.05	6.383				
TX 802.11n(40) Mode								
CH03	2422	9.83	7.41	5.508				
CH06	2437	9.54	7.12	5.152				
CH09	2452	9.33	6.91	4.909				



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1Mbps							
Test Channel	Frequency	Peak Output Power	Peak Output Power				
lest Chamilei	(MHz)	(dBm)	(mW)				
CH00	2402	3.21	2.094				
CH39	2441	3.97	2.495				
CH78	2480	3.01	2.000				
	2Mbps						
CH00	2402	2.24	1.675				
CH39	2441	3.09	2.037				
CH78	2480	2.17	1.648				
3Mbps							
CH00	2402	2.52	1.786				
CH39	2441	3.33	2.153				
CH78	2480	2.39	1.734				

Remark: The best case gain of the antenna is 1.0dBi.

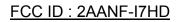
1.0 dBi logarithmic terms convert to numeric result is nearly 1.26

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:

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

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		
	TX 802.11b Mode								
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		
			TX 802	2.11g Mode					
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		
TX 802.11n-HT20 Mode									
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		
TX 802.11n-HT40 Mode									





CH03	6.0~8.0	8.0	6.310	5	2.422	1.96	3
CH06	6.0~8.0	8.0	6.310	5	2.437	1.97	3
CH09	6.0~8.0	8.0	6.310	5	2.452	1.98	3

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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		
			1	Mbps					
CH00	2~4	4	2.512	5	2.402	0.779	3		
CH39	2~4	4	2.512	5	2.441	0.785	3		
CH78	2~4	4	2.512	5	2.480	0.791	3		
	2Mbps								
CH00	2~4	4	2.512	5	2.402	0.779	3		
CH39	2~4	4	2.512	5	2.441	0.785	3		
CH78	2~4	4	2.512	5	2.480	0.791	3		
3Mbps									
CH00	2~4	4	2.512	5	2.402	0.779	3		
CH39	2~4	4	2.512	5	2.441	0.785	3		
CH78	2~4	4	2.512	5	2.480	0.791	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.