RF EXPOSURE EVALUATION METHOD

FCC ID:2ACH9HM-1407Q

SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 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 ≤ 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 and ≤ 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	12.68	9.31	8.531
CH06	2437	12.73	9.51	8.933
CH11	2462	12.42	9.23	8.375
TX 802.11g Mode				
CH01	2412	11.24	8.16	6.546
CH06	2437	11.46	8.38	6.887
CH11	2462	11.45	8.25	6.683
TX 802.11n(20) Mode				
CH01	2412	10.38	7.31	5.383
CH06	2437	10.25	7.18	5.224
CH11	2462	10.12	7.22	5.272
TX 802.11n(40) Mode				
CH03	2422	9.83	6.93	4.932
CH06	2437	9.97	6.99	5.000
CH09	2452	9.94	6.77	4.753

BT3.0:

1Mbps			
Test Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)
CH00	2402	0.52	1.127
CH39	2441	1.62	1.452
CH78	2480	1.71	1.483
2Mbps			
CH00	2402	0.07	1.016
CH39	2441	1.30	1.349
CH78	2480	1.50	1.413
3Mbps			
CH00	2402	0.53	1.130
CH39	2441	1.64	1.459
CH78	2480	1.78	1.507

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 ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)] • [√f(GHz)]

WIFI:

Mode	[(max. power of channel, including tune-up tolerance, mW)	(min. test separation distance,mm)]	[f(GHz)]	Result	Limit
802.11b					
CH01	8.531	5	2.412	2.65	3
CH06	8.933	5	2.437	2.79	3
CH11	8.375	5	2.462	2.63	3
802.11g					
CH01	6.546	5	2.412	2.03	3
CH06	6.887	5	2.437	2.15	3
CH11	6.683	5	2.462	2.10	3
802.11n(20)					
CH01	5.383	5	2.412	1.67	3
CH06	5.224	5	2.437	1.63	3
CH11	5.272	5	2.462	1.65	3
802.11n(40)					
CH03	4.932	5	2.422	1.54	3
CH06	5.000	5	2.437	1.56	3
CH09	4.753	5	2.452	1.49	3

BT3.0:

Mode	[(max. power of channel, including tune-up tolerance, mW)	(min. test separation distance,mm)]	[f(GHz)]	Result	Limit
1Mbps					
CH00	1.127	5	2.402	0.349	3
CH39	1.452	5	2.441	0.454	3
CH78	1.483	5	2.480	0.467	3
2Mbps					
CH00	1.016	5	2.402	0.315	3
CH39	1.349	5	2.441	0.422	3
CH78	1.413	5	2.480	0.445	3
3Mbps					
CH00	1.130	5	2.402	0.350	3
CH39	1.459	5	2.441	0.456	3
CH78	1.507	5	2.480	0.475	3

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

Conclusion: No SAR is required.