RF EXPOSURE EVALUATION METHOD

FCC ID: 2ABHZCLE-DSM-7013

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 Conducted Output Power(PK)	Maximum Conducted Output Power(AV)	Maximum Conducted Output Power(AV)mW
	(MHz)	(dBm)		dBm
CH01	2412	12.43	8.32	6.79
CH06	2437	12.72	8.39	6.90
CH11	2462	12.81	8.46	7.01
TX 802.11g Mode				
CH01	2412	10.49	7.22	5.27
CH06	2437	10.68	7.31	5.38
CH11	2462	10.75	7.41	5.51
TX 802.11n20 Mode				
CH01	2412	10.22	6.34	4.31
CH06	2437	9.86	6.27	4.24
CH11	2462	10.33	6.45	4.42
TX 802.11n40 Mode				
CH03	2422	9.33	6.03	4.01
CH06	2437	9.62	6.12	4.09
CH09	2452	9.64	6.17	4.14

BT:

1Mbps			
Test Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (m\W
CH00	2402	0.68	1.17
CH39	2441	0.26	1.06
CH78	2480	1.07	1.28
2Mbps			
CH00	2402	0.132	1.03
CH39	2441	-0.238	0.95
CH78	2480	0.621	1.15
3Mbps			
CH00	2402	0.277	1.07
CH39	2441	-0.107	0.98
CH78	2480	0.787	1.20

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	6.79	5	2.412	2.11	3
CH06	6.90	5	2.437	2.16	3
CH11	7.01	5	2.462	2.20	3
802.11g					
CH01	5.27	5	2.412	1.64	3
CH06	5.38	5	2.437	1.68	3
CH11	5.51	5	2.462	1.73	3
802.11n(20)					
CH01	4.31	5	2.412	1.34	3
CH06	4.24	5	2.437	1.32	3
CH11	4.42	5	2.462	1.39	3
802.11n(40)					
CH03	4.01	5	2.422	1.25	3
CH06	4.09	5	2.437	1.28	3
CH09	4.14	5	2.452	1.30	3

BT

Mode	[(max. power of channel, including tune-up tolerance, mW)	(min. test separation distance,mm)]	[√ f(GHz)]	Result	Limit
1Mbps					
CH00	1.17	5	2.402	0.36	3
CH39	1.06	5	2.441	0.33	3
CH78	1.28	5	2.480	0.40	3
2Mbps					
CH00	1.03	5	2.402	0.32	3
CH39	0.95	5	2.441	0.30	3
CH78	1.15	5	2.480	0.36	3
3Mbps					
CH00	1.07	5	2.402	0.33	3
CH39	0.98	5	2.441	0.30	3
CH78	1.20	5	2.480	0.38	3

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

Conclusion: No SAR is required.