RF EXPOSURE EVALUATION METHOD

FCC ID:2AF9K-HUMMER

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	11.89	9.53	8.974
CH06	2437	11.84	9.58	9.078
CH11	2462	11.94	9.58	9.078
TX 802.11g Mode				
CH01	2412	10.98	9.02	7.980
CH06	2437	11.09	9.13	8.185
CH11	2462	10.93	8.97	7.889
TX 802.11n(20) Mode				
CH01	2412	10.74	8.78	7.551
CH06	2437	10.63	8.67	7.362
CH11	2462	10.67	8.71	7.430
TX 802.11n(40) Mode				
CH03	2422	10.28	8.32	6.792
CH06	2437	10.37	8.41	6.934
CH09	2452	10.33	8.37	6.871

Remark: The best case gain of the antenna is 3.0dBi.

3.0 dBi logarithmic terms convert to numeric result is nearly 2.0

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:

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 802.11g Mode							
CH01	7.0~9.0	9.6	9.120	5	2.412	2.83	3
CH06	7.0~9.0	9.6	9.120	5	2.437	2.85	3
CH11	7.0~9.0	9.6	9.120	5	2.462	2.86	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	7.0~9.0	9.0	7.943	5	2.422	2.47	3
CH06	7.0~9.0	9.0	7.943	5	2.437	2.48	3
CH09	7.0~9.0	9.0	7.943	5	2.452	2.49	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.