RF EXPOSURE EVALUATION METHOD

FCC ID:2AFJH-SPIRITKIT

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.

BT 3.0

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)
1Mbps			
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

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Test Channe	Frequency (MHz)	Maximum Conducted Output Power(PK) (dBm)	Maximum Conducted Output Power(PK) mW
CH00	2402	-4.78	0.333
CH19	2440	-4.77	0.333
CH39	2480	-4.73	0.337

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)]

BT 3.0

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
1Mbps							
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
2Mbps							
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
3Mbps							
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

BT 4.0

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	-6~-4	-4	0.398	5	2.402	0.123	3
CH39	-6~-4	-4	0.398	5	2.441	0.124	3
CH78	-6~-4	-4	0.398	5	2.480	0.125	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.