

FCC ID : 2ABTP-CRYSTAL-II

Portable device

According to §15.247(e)(i) and §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to KDB 447498 D01 General RF Exposure Guidance v05, section 4.3.1

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:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,¹⁶ where

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

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.

802.11b				
Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculation Value	Threshold Value
2412	9.08	8.09	2.51	3.0
2437	8.46	7.01	2.19	3.0
2462	8.04	6.37	2.00	3.0

802.11g				
Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculation Value	Threshold Value
2412	7.95	6.24	1.94	3.0
2437	7.81	6.04	1.89	3.0
2462	7.48	5.60	1.76	3.0

802.11n20				
Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculation Value	Threshold Value
2412	7.70	5.89	1.83	3.0
2437	7.14	5.18	1.62	3.0
2462	6.70	4.68	1.47	3.0

802.11n40				
Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculation Value	Threshold Value
2422	7.51	5.64	1.76	3.0
2437	6.56	4.53	1.41	3.0
2452	6.06	4.04	1.27	3.0

Threshold at which no SAR required is ≤ 3.0 for 1-g SAR, Separation distance is 5mm.

Conclusion: No SAR is required.

SIMULTANEOUS TRANSMISSION EVALUATION

N/A