

## **RF exposure evaluation**

### **§ 2.1093 Radiofrequency radiation exposure evaluation: Portable Devices.**

**According to § 15.247(i) and § 1.1307b(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 guidance.**

The 1-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  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, where

- $f(\text{GHz})$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm according is applied to determine SAR test exclusion.
- The result is rounded to one decimal place for comparison

**Main Power:  $44.63\text{dB}\mu\text{V/m}=44.63-95.2=-50.57\text{dBm}$**

**Less than 30MHz:- $50.57+6=-44.57\text{dBm}$**

- ASK

Modulation	Frequency (MHz)	Max. Power (dBm)	Tune up Power (dBm)	Max. Tune up Power (dBm)	Max. Tune up Power (mW)	Test distance (mm)	Result	exclusion thresholds for 1-g SAR
ASK	0.125	-44.57	-45 $\pm$ 1	-44	0.00004	5	0	3.0

### **Conclusion:**

For the max result :  $0 \leq \text{FCC Limit } 3.0$  for 1g SAR.

The Product unsupported at the same time to Transmitting.