

FCC §1.1307 & §2.1093 - RF EXPOSURE

Applicable Standard

According to FCC §2.1093 and §1.1307(b) (1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB 447498 D01 General RF Exposure Guidance

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, where

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

Measurement Result

For worst case:

Mode	Frequency (MHz)	Maximum Tune Up Power [#]		Maximum Tune Up Time Average Power (mW)	Distance (mm)	Calculated value	Threshold (1-g SAR)	SAR Test Exclusion
		(dBm)	(mW)					
DECT	1921.536-1928.448	19.5	89.13	3.71	5	1.0	3.0	Yes

Note 1: The maximum Tune Up Time Average Power = Maximum Tune Up Power * Duty cycle

Note 2: This device is a DECT standard wireless device adopting a TDD-TDMA frame structure with a frame period of 10ms and 24 time slots. A single communication link occupies one uplink transmission time slot, resulting in a transmission duty cycle of 1/24. So the maximum average power (1/24) was used as the test benchmark (the strictest condition).

Result: Compliant