

SAR test exclusion evaluation compliance requirement

Model no.: LED-AC

1. KDB 447498 D01 v06 requirement

Standalone SAR test exclusion considerations:

Calculation formula:

$E \text{ (V/m)} = (30 \cdot P \cdot G)^{0.5} / d$, E = Electric Field (V/m)

P = Peak RF output Power (W), G = EUT Antenna numeric gain (numeric)

d = Separation distance between EUT and antenna (m)

Remark: $E \text{ (V/m)} = 10^{(dB_{UV}/m)/20} \times 10^{-6}$, $P = (E \cdot d)^2 / 30G$

Or $ERP = PG = (E \cdot d)^2 / 30$, $EIRP = ERP + 2.15 \text{ dB}$

in the formula above, d=3m, field strength=96.4dBuV/m (max described by client),
So P=1.32 mW

The worst case test separation distance is **5mm**.

The product belongs to **standalone portable device** base the FCC rule part 2.1091&2.1093. The transmission frequencies of the device are between 100 MHz and 6 GHz.

In KDB 447498 D01 v06: 4.3.1 Standalone SAR test exclusion considerations:

The SAR Test Exclusion Threshold is calculated from:

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

- 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 Max Conducted Output Power and SAR Test Exclusion Threshold (mW) are listed below:

Transmit Frequency (MHz)	Output power (mW)	SAR Test Exclusion Threshold (mW)
2435-2455	1.32	9.6

According to SAR Exclusion Threshold in KDB 447498 (D01) General RF Exposure Guidance v06, the SAR report is not required.

Test Location:

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

All tests were performed at:

Room102/104, No 203, KeZhu Road, Science City, GETDD Guangzhou, China