



Radio Frequency Exposure

STANDARDS

FCC Part2 (Section 2.1091)
KDB 447498 D01
IEEE C95.1

LIMIT

KDB 447498 D01 § 4.3(a)

For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

*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 values 3.0 and 7.5 are referred to as numeric thresholds in step b) below

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 according to 4.1 f) is applied to determine SAR test exclusion

EUT Specification

EUT	Electrocardiograph
Frequency band (Operating)	<input type="checkbox"/> WLAN: 2400MHz ~ 2483.5MHz <input type="checkbox"/> WLAN: 5150MHz ~ 5250MHz <input type="checkbox"/> WLAN: 5725MHz ~ 5850MHz <input checked="" type="checkbox"/> Bluetooth: 2402MHz ~ 2480MHz
Device category	<input checked="" type="checkbox"/> Portable (<20cm separation) <input type="checkbox"/> Mobile (>20cm separation)
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure <input checked="" type="checkbox"/> General Population/Uncontrolled exposure
Antenna diversity	<input type="checkbox"/> Single antenna <input checked="" type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input checked="" type="checkbox"/> Tx/Rx diversity
Max. output power	7.39 dBm (5.48mW)
Antenna gain (Max)	2.5 dBi
Evaluation applied	<input type="checkbox"/> MPE Evaluation* <input checked="" type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A

Remark:

1. The maximum output power is 7.39 dBm (5.48mW) at 2480MHz (with numeric 2.5 antenna gain.)
2. DTS device is not subject to routine RF evaluation; MPE estimate is used to justify the compliance.
3. For mobile or fixed location transmitters, no SAR consideration applied.

*Note: Simultaneous transmission is not applicable for this EUT.

**TEST RESULTS**

According to the KDB447498:

The SAR test exclusion thresholds Level:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] * \text{sqrt}(\text{freq. in GHz}) < 3$$

Calculation

Modulation Mode	Frequency band (MHz)	Max. Conducted output power (dBm)	Max. Conducted output power (mW)	Distance (mm)	SAR test exclusion thresholds (mW)
GFSK	2402-2480	7.39	5.48	5	10

Since the source-based time-averaging conducted output power is well below the SAR low threshold level, so the EUT is considered to comply with SAR requirement without testing