

FCC ID : 2ALVK-HANP35T

➤ Test Standards and Limits

1. According to KDB 447498 D01 v06, Section 4.3.1

2. FCC Radiofrequency radiation exposure limits:

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:

$[(\text{max power of channel})/(\text{min test separation distance})]^*[\sqrt{f(\text{GHz})}] \leq 3.0$ 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
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds

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.

For 2.4G band device, the limit of worse case is

$$P_{\text{max}} \leq 3.0 * D_{\text{min}} / f = 3.0 * 5 / 2.480 = 9.525 \text{ mW}$$

➤ Measurement and Calculation

1. Maximum transmit power

Antenna Gain: -0.86 dBi

Operation Mode	Modulation	Channel Number	Channel Frequency (MHz)	Measurement Level (dBm)
Bluetooth DTS_1M	GFSK	0	2402	4.50
		19	2440	4.66
		39	2480	4.61
Bluetooth DTS_2M	GFSK	0	2402	4.63
		19	2440	4.80
		39	2480	4.81
Bluetooth DSS	GFSK	0	2402	-3.62
		39	2441	-3.25
		78	2480	-2.67
	$\pi/4$ -DQPSK	0	2402	-3.45
		39	2441	-2.86
		78	2480	-2.29

2. MPE Calculation

The Max Conducted Peak Output Power is 4.81 dBm.

The Max Antenna Gain is -0.86 dBi.

According to the formula. calculate the EIRP test result:

$$\text{EIRP} = P \times G = 3.03 \text{ mW} \times 0.82 = 2.48 \text{ mW} < 9.525 \text{ mW}$$

So the SAR report is not required.

-End of the Report-