

Applicant's name : SHENZHEN D-light Technolgy Limited
Manufacture's name : SHENZHEN D-light Technolgy Limited
Model name : DP30A
FCC ID : 2AIXD-DR55Q37

RF Exposure

Test Requirement : FCC Part 1.1307
Evaluation Method : KDB 447498 D01 General RF Exposure Guidance v05

Requirements

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:

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

$f(\text{GHz}) \leq 3.0$ 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

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 is applied to determine SAR test exclusion.

The Result:

$P_t = 9.24 \text{ dBm} = 8.395 \text{ mW}$

The result is rounded to one decimal place for comparison

1. BT Max Worse case is as below: [2402 MHz – 2.965mW output power]

$$(2.965 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.412 \text{ (GHz)}}] = 0.921 < 3.0 \text{ for 1 - g SAR}$$

2. BLE Max Worse case is as below: [2402 MHz – 0.55mW output power]

$$(0.55 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.412 \text{ (GHz)}}] = 0.170 < 3.0 \text{ for 1 - g SAR}$$

2. WIFI Max Worse case is as below: [2412 MHz – 2.965mW output power]

$$(2.965 \text{ mW} / 5 \text{ mm}) \cdot [\sqrt{2.412 \text{ (GHz)}}] = 2.610 < 3.0 \text{ for 1 - g SAR}$$

Note: WIFI/BT cannot transmitters do not transmit simultaneously

Then SAR evaluation is not required

Note : For the maximum power, refer to FCC test report.