

RF Exposure Requirements

Product Description: NFC Module

Model No.: B20FDU6

FCC ID: 2AQ5RNFCB20FDU6

According to the KDB 447498 D01 V06, clause 4.3, the following RF exposure evaluation shall to demonstrate RF exposure compliance.

13.56 MHz

Tx frequency: 13.56 MHz Type of Modulation: ASK

Antenna Type: Integral antenna (Gain: 0 dBi)

Nominal rated field strength: 48 dB μ V/m at 3m

Maximum allowed field strength of production tolerance: +/- 1dB

Based on the Maximum allowed field strength of production tolerance was 49 dB μ V/m at 3m in frequency 13.56MHz, thus;

The EIRP = $[(FS \cdot D)^2 \cdot 1000 / 30] = 0.00002 \text{ mW}$

Thus;

Conducted power = Radiated Power (EIRP) – Antenna Gain

So;

Conducted Power = 0.00002 mW.

The SAR Exclusion Threshold Level for 13.56MHz when the minimum test separation distance is < 50mm:

$= [474 * (1 + \log_{10}(f(\text{MHz})))]/2$

$= 443 \text{ mW}$

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.