

SAR Exclusion Calculations

FCC-ID: 2AMPCT03

As Per KDB 447498 Section 4.3S AR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Test Exclusion Threshold.

Typical Use

This device is intended for use on an animal and will typically be at more than 20cm from a person and so will fall into the mobile use category, however on we will also show compliance for portable use case of 5mm.

Exposure Calculations @ 20cm

Distance: 20cm

Frequency: 915MHz

Maximum Power: 15.8mW

Antenna Gain: -0.5dBi

$$\begin{aligned}\text{Power Density (S)} &= (\text{power} \times \text{gain}) / 4\pi R^2 \\ &= (\text{power} \times \text{gain}) / 5026.5 \quad (\text{calculated for cm, at 20 cm}) \\ &= 0.0028 \text{ mW/cm}^2\end{aligned}$$

Where the 20cm limit at 915 MHz is: 0.61 mW/cm²

Portable Calculation @ 5mm

SAR Calculation = (conducted power / distance) x √ Frequency

$$= (15.8 / 5) \times \sqrt{0.915} = 3.0$$

Where the limit is: ≤3.

Conclusion

Result is less than the relevant limits therefore FCC ID 2AMPCT03 qualifies for exemption from SAR testing