

Proof of AV120 Compliance with SAR RF Limits

FCC ID: HCQ3B6AVBLP

IC ID: 2309A-AVBLP

9. RF Exposure Information:

Calculation for compliance with SAR requirements (47CFR2.1093) is done using a maximum transmitter field strength of 50mV/m at 3 meters as limited by 47CFR15.249.

If we convert this to an EIRP value:

$$P_{TX} (dBm) = 10 \times \log \left[\frac{4 \times \pi \times D^2}{377} \times \left(\frac{E}{1 \times 10^6} \right)^2 \right] + 30$$

Where D is the distance in meters and E is the field strength in $\mu\text{V/m}$

$$P_{TX} (dBm) = -1.25 dBm$$

or

$$P_{TX} (mW) = 0.75 mW$$

The peak exposure limit is 1.6 mW/g (equivalent to 1.6 W/kg per 47CFR2.1093) in any 1 gram of tissue for General Population/Uncontrolled applications.

If all of the transmitted power were absorbed in a 1-gram sample of tissue, the power density is 0.75 mW/gram and is still below the 1.6 mW/gram limit

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