

# RF Exposure evaluation

FCC ID: 2A93A-TC-20A

## 1.1. Applicable Standard and Requirement

According to §1.1307(b)(3)(i)A: The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section. Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);

## 1.2. RF Exposure Evaluation:

Calculate the EIRP from the radiated field strength in the far field using Equation (22):

$$EIRP = E_{\text{Meas}} + 20 \log(d_{\text{Meas}}) - 104.7 \quad (22)$$

where

$EIRP$  is the equivalent isotropically radiated power, in dBm  
 $E_{\text{Meas}}$  is the field strength of the emission at the measurement distance, in dB $\mu$ V/m  
 $d_{\text{Meas}}$  is the measurement distance, in m

NOTE—Because this equation yields the identical result whether the field strength is extrapolated using the default 20 dB/decade of distance extrapolation factor, or the field strength is not extrapolated for distance, this equation can generally be applied directly (with no further correction) to determine EIRP. In some cases, a different distance correction factor may be required; see 9.1.

Calculate the EIRP from the conducted power using Equation (23):

$$EIRP = P_{\text{Cond}} - G_{\text{EUT}} \quad (23)$$

where

$EIRP$  is the equivalent isotropically radiated power, in dBm  
 $P_{\text{Cond}}$  is the measured power at feedpoint of the EUT antenna, in dBm  
 $G_{\text{EUT}}$  is the gain of the EUT radiating element (antenna), in dBi

## 2. Evaluation Result

Reference report NO. CTA23012900501

E=76.62 dB $\mu$ V/m

EIRP=76.62+20Log(3)-104.7=76.62+9.54-104.7=-18.54dBm

Evaluation Results

f (GHz)	Antenna Distance (mm)	Emeas dB $\mu$ V/m	EIRP dBm	EIRP Mw	SAR Test Exclusion Threshold mW	SAR Test Exclusion
433.90	5	76.62	-18.54	0.0140	1.0	Yes

.....End of Report.....