RF Exposure Evaluation

Product Description: REMOTE CONTROL AIRCRAFT

Model Number: CG031

FCC ID: 2AE8UCG031

According to 447498 D0**1** General RF Exposure Guidance v05 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: [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

f(GHz) is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

The transmitter output power (P_t) formula was showed as the follow:

$P_t = (E \times d)^2 / (30 \times g_t)$

P_t = transmitter output power in watts

g_t = numeric gain of the transmitting antenna (unitess)

E = electric field strength in V/m

d = measurement distance in meters (m)

According to the formula described above:

Emax=<u>76.25</u>dBuv/m=<u>0.065</u>V/m, d=3m, g_t=1

$P_t = (E \times d)^2 / (30 \times g_t) = (0.065 \times 3)^2 / (30 \times 1) = 0.00014W = 0.14mW$

The result is rounded to one decimal place for comparison

Worse case is as below: [2475MHz -0.14mW output power]

(0.14mW / 5mm)*[√2.475(GHz)] = <u>0.04</u>< 3.0 for 1 - g SAR

Then SAR evaluation is not required

NOTE: For the maximum power, you can refer FCC test report.