

## RF Exposure evaluation

**Product Name: Short Range Device Wireless Video Transmitter**

**Model Number: DCS500T**

**FCCID: YRKDCS500T**

According to 447498 D01 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  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where

$f(\text{GHz})$  is the RF channel transmit frequency in GHz

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

The result is rounded to one decimal place for comparison

$$e_{\text{irp}} = P_t \times g_t = (E \times d)^2 / 30$$

Where:

$P_t$  = transmitter output power in watts,

$g_t$  = numeric gain of the transmitting antenna (unitless),

$E$  = electric field strength in V/m, ---  $10^{(\text{dBuV/m}/20)}/10^6$

$d$  = measurement distance in meters (m) --- 3m

$$\text{So } P_t = (E \times d)^2 / 30 \times g_t$$

Field strength: DCS500T: 104.451 dBuV/m @3m

Refer to 708881427602-02 FCC Part 15C 15.249 Test Report page 14.

Ant gain = 0dBi; so Ant numeric gain=1

$$\text{So, for DCS500T, } P_t = \{[(10^{(104.451/20)}/10^6) \times 3]^2 / 30 \times 1\} \times 1000\text{mW} = 8.360 \text{ mW}$$

$$(8.360 \text{ mW}/5\text{mm}) \times \sqrt{2.468} = 2.627 < 3$$

Then SAR evaluation is not required