



**Neutron Engineering Inc.**

# **FCC RF EXPOSURE REPORT**

**FCC ID: YT2SDSWITX2010**

**Project No.** : 1009C122  
**Equipment** : Wireless Transmitter  
**Model** : SDSWiTX  
**Applicant** : Elan Home Systems, LLC  
**Address** : 1300 East New Circle Road, Suite 150 Lexington,  
KY 40505-4259, United States  
**According:** : FCC Guidelines for Human Exposure IEEE C95.1

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### MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

| Ant. | Brand name | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|------------|------------|--------------|-----------|------------|
| 1    | N/A        | N/A        | PCB Antenna  | N/A       | 3.30       |

### TEST RESULTS

|              |                      |                    |              |
|--------------|----------------------|--------------------|--------------|
| EUT:         | Wireless Transmitter | Model Name :       | SDSWiTX      |
| Temperature: | 25 °C                | Relative Humidity: | 60 %         |
| Pressure:    | 1012 hPa             | Test Voltage :     | AC 120V/60Hz |
| Test Mode :  | CH00/ CH19 /CH37     |                    |              |

| Antenna Gain (dBi) | Antenna Gain (numeric) | Peak Output Power (dBm) | Peak Output Power (mW) | Power Density (S) (mW/cm <sup>2</sup> ) | Limit of Power Density (S) (mW/cm <sup>2</sup> ) | Test Result     |
|--------------------|------------------------|-------------------------|------------------------|---|--|-----------------|
| 3.3                | 2.1380                 | 14.48                   | 28.0543                | 0.01193852                              | 1  | Complies        |
| <b>3.3</b>         | <b>2.1380</b>          | <b>14.49</b>            | <b>28.1190</b>         | <b>0.01196604</b>                       | <b>1</b>   | <b>Complies</b> |
| 3.3                | 2.1380                 | 13.11                   | 20.4644                | 0.00870864                              | 1  | Complies        |

The MPE is calculated as **0.01196604**mW / c m<sup>2</sup> < limit 1 mW / c m<sup>2</sup>. So, RF exposure limit warning or SAR test are not required.

For 2403.328~2479.104 MHz, the EUT will only be used with a separation of 20cm or greater between the antenna and nearby persons and can therefore be considered a mobile transmitter per 47CFR2.1091 (b).

The RF Exposure Information page from the manual is included here for reference.