

DS-2149-A TX Operation Description

TX Frequency: 27.045MHz

Modulation Type: ASK

DS-2149-A is a mouse with 10 function keys. It contains 2 pieces of rechargeable battery and may be charged from USB port.

The mouse is designed with 2 ICs: Optical sensor U2 (PAN301) and RF MCU U1 (PM6227). Q1 and Q2 etc. form circuits of charging and RF automatic stop function.

RF MCU U1 integrates a DC-DC converter to convert battery voltage to a stable DC 3V for supplying the mouse. U1 receives signals of function keys when working. When the mouse moved by a user, Optical sensor U2 detects the movement and send a signal to U1. All signals are processed in U1 and encoded. Y2 is an oscillator of RF generator with frequency 27.042MHz. The frequency is modulated to frequency $27.045\text{MHz} \pm 3\text{kHz}$, then amplified and transmitted by an antenna.

Q1 and Q2 etc. form a charging circuit to charge batteries when their voltage less than 2.9V. Charging is stop automatically when batteries are fully charged.