Applicant：Sharper Innovations Ltd.
FCC ID：TDZGL2009W

Operation Description

This circuit for 2.4GHz optical wireless mouse is a dedicated circuit, automatic search function, use frequency lock of code that can not be connected, when using effective distance can reach 10m.
Using COMPX mouse controller, SIGNIA RF transmitter, optical sensor OPTO UNITY. U4 is power management. U4 is the circuit of boost pressure, it make the battery's voltage reach 3V to support the mouse working.
Then, by U1, U2 U3 composition 2.4GHz RF transmit circuit. Among the special chip for RF transmit U3, with 12MHz oscillation frequency. U2 for ID code memory, U1 as the mouse controller, with 4MHz oscillation frequency, made mouse control circuit with the surrounding circuits. The electric circuit produce 2.4GHz RF signal after put into two AAA batteries, and meets the signal frequency, automatically locked. In use, by U1 complete control of the function, including left key, right key, handwheel key, etc, this circuit most support seven keys. U5 for optical sensor, LED2 provide light through the desktop medium, and refraction induction window of sensor. When the mouse moves in desktop, the refracted light will be change follow desktop medium, the received signal will be transformed to digital signal, U1 encode to digital signal and give U3, U3 convert the 2.4GHz RF signals to transmit. SRNSOR directly influences the quality of performance of the cursor.

DE1 for battery voltage tester, when the battery is too low, DE1 control LED1 ablaze (interval 1s), indicating the battery need to change.

Antenna is formed by a copper trace on the PCB. Common grounding on PCB is not connected to real external ground. Power supply is DC 3V by two “AAA” batteries.