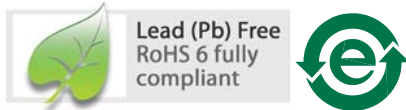


PAW3212DB-TJDT

ULTRA LOW POWER WIRELESS MOUSE CHIP



General Description

The PixArt PAW3212DB-TJDT is optimized for red LED based wireless mouse applications. It has low power architecture, high precision surface tracking ability, automatic power management modes, flexible programmable resolutions, configurable sleep and wake-up time which make it suitable for power-sensitive wireless mouse application. The PAW3212DB-TJDT is capable of high-speed motion detection up to the velocity of 30 inches/sec and acceleration of 10g.

General Features

- Single power with wide voltage range
 Low Voltage Segment : 1.7V to 2.1V (VDD, VDDA short)
 High Voltage Segment : 2.1V to 3.6V (VDDA should connect a capacitor to GND)
- Selectable 3-wired (default) or 2-wired SPI serial interface
- Selectable 8-bit (default) or 12-bit motion data length for Delta_X and Delta_Y
- Selectable resolution up to 2400cpi with 38 cpi/ step (based on x1 lens magnification)
- Motion detection interrupt output
- Tracking speed up to 30ips (inches/sec) and 10g acceleration
- Built-in Low Power Timer (LPT) for Sleep1/ Sleep2/ Sleep3⁽¹⁾ mode
- Adaptive frame rate control for extra power saving during moving at different speeds

Key Specifications

Supply Voltage	1.7V ~ 2.1V (VDD, VDDA short) 2.1V ~ 3.6V (VDDA should connect a capacitor to GND)
Interface	3-wired or 2-wired SPI Max clock speed : 2 MHz
Tracking Speed	Up to 30ips
Acceleration	Up to 10g
CPI Resolution	Up to 2400cpi with 38 cpi/step
Frame Rate	Adaptive frame rate Max : 4000 fps (frames per sec)
Operating Current	VDD=2.7V Run Avg : 0.25mA ⁽²⁾ Sleep1 : 16uA Sleep2 : 7uA Sleep3 : 4uA Power down : 3uA * Not including LED current
Package	iDIP 8

Note :

1. In default, Sleep3 is not enabled and it can be enabled by changing the setting in register 0x06 through SPI interface
2. An average current based on 85% weighting for chip moving at speed \leq 5ips and 15% weighting for speed >5ips