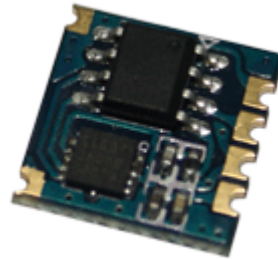


DSPX01 Digital 3D Pedometer Module

V2.00

Features

- Pulse output
- Counting Accuracy: $\pm 3\%$
- Working current: $<170\mu\text{A}$
- Standby current: $<5\mu\text{A}$
- Supply voltage: 2.5~3.3V
- Working Temp: $-10\sim+55^{\circ}\text{C}$
- Dimensions: 11.3*11.4*2mm



Application

- Intelligent phone
- Sports shoes
- Pets healthcare
- Portable pedometer

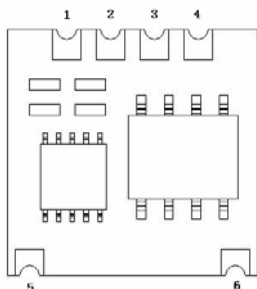
DESCRIPTION

DSPX01 is a type of 3 axes acceleration module designed for pedometer applications. It consists of a 3 axes acceleration sensor (MEMS G sensor) and a low power high performance MCU. The MCU analyses the sensor data originated from physical movements. When there is a walking step or running step, the DSPX01 module will output the step information in the form of a high level pulse so it is very easy to use. The output pulse width is 50ms in high level. In motionless status the output of DSPX01 module is low level.

DSPX01 module can enter sleep mode by setting CS pin to low in order to save power consumption. This module works at 2.5~3.3V with extra low power consumption. Because of its compact size, DSPX01 module can be embedded into mini sports products such as Strip pedometer, Sports shoes, etc. Because the movements of human beings are different from animals and the forces in different parts of body are also different, DORJI can make slight adjustment on the width of pulse or frequency of modules in order to make it more suitable for the actual applications. Besides modules, DORJI also can provide MCU with algorithm solely for applications with

requirements on more compact size and even can help customers design from concept to finished product and till the final production.

PIN FUNCTIONS



PIN	DIP	Function	Description
1	VDD	Power	Power supply
2	GND	Ground	Ground (0V)
3	DATA	Output	Pulse output. The width is 50ms in high level for per movement
4	CS	Input	High: normal work; Low: sleep mode
5,6	GND	Ground	Ground (0V)

Table 1 DSPX01 Pin Functions

ELECTRICAL SPECIFICATIONS

Symbol	Parameter (condition)	Min.	Typ.	Max.	Units
VDD	Supply Voltage	2.5	3	3.3	V
Temp	Operating temperature range	-10	25	55	°C
IDD	Sleep mode		5		uA
	Operation mode		170		uA
Pw	Pulse width		50		ms

Table 2 DSPX01 Electrical Specifications

MECHANICAL DATA

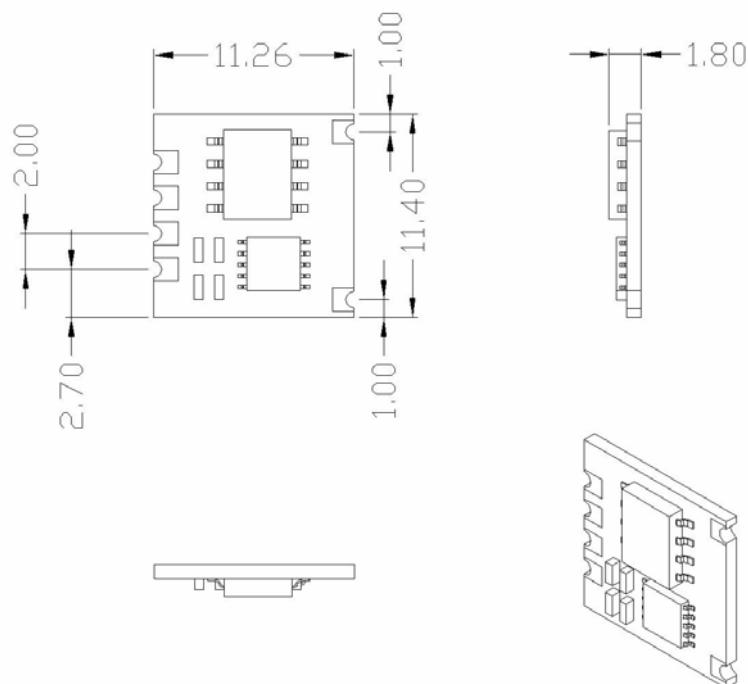


Figure 1: DSPX01 Dimensions

Dorji Applied Technologies

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