



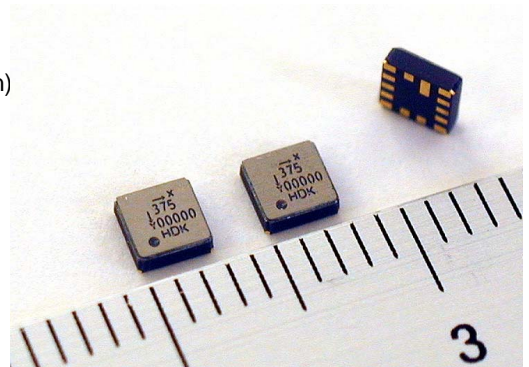
# Digital Output Type 3-axis Acceleration Sensor

HAAM-375

Functional interrupt output function reduces your burden of developing application software !!

### ■ Features

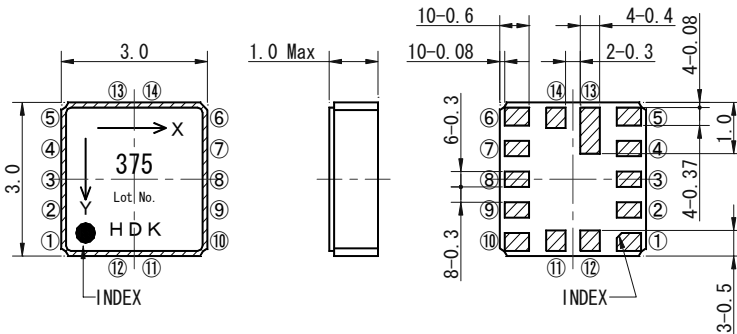
- Output various interrupt signals by preset threshold (Screen info, Wakeup, Drop detection)
- 8-bit digital acceleration signal output
- Serial Interface available (I2C)
- Low Voltage Drive (2.4V~), Interface block can be driven by as low as 1.7V
- Low Power Consumption Standby mode: (3  $\mu$  A Max.)  
Normal mode: 100  $\mu$  A Max. (when DR=10ms selected)
- Various calibrations are done by built-in EEPROM



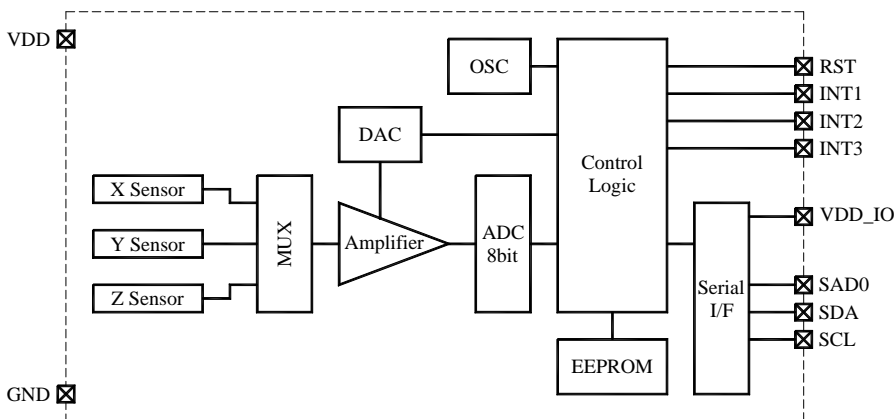
### ■ Additional function

Item	Function
Data rate change function	This function is to change data rate(DR) by register setting Settable data rate: 10,80,160,320mS
Moving average measure function	This function is to output result which averaged measure value by designated number of times. (4, 8, 16 times) When moving average is selected, internal sampling cycle becomes 5mS and data rate will be determined by 5mSxaverage number of times.

### ■ Outline Dimensions



### ■ Block Diagram





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## Terminal Assignment & Functions

No	Terminal	Function
1	RST	Reset signal input (Lo: Reset / Hi: Normal operation)
2	GND	Power ground
3		
4		
5		
6	INT1	Interrupt 1 signal output
7	INT2	Interrupt 2 signal output
8	INT3	Interrupt 3 signal output
9	SCL	I2C Serial data clock input
10	SDA	I2C Serial data input/output
11	Reserved	Please connect to GND.
12	SAD0	I2C Slave address LSB setting This terminal has pull-up resistor (300kΩ Typ.) against VDD_IO built in. When Open processed, slave address LSB becomes Hi.
13	VDD	Power supply input to drive sensor
14	VDD_IO	Power supply input to drive serial interface. If its voltage differs from sensor drive power supply, please connect interface power supply to this terminal. If the drive power supply is same, please short-circuit to VDD terminal.

## Standard Specification

Ta=25°C, Vcc=2.5V

Item	Rating			Unit	Remark		
	Min.	Typ.	Max.				
Operating Condition							
Temperature Range	Storage Temperature Range	-40		85	°C		
	Operating Temperature Range	-25		75	°C		
Power Supply	Operating Voltage Range	2.4	2.5	3.6	V	VDD	
	Interface Voltage Range	1.7		VDD	V		
	Current Consumption	DR=10ms		50	100	μA	When normal mode selected Able to change by register setting
		DR=80ms		10	20	μA	
		DR=160ms		8	15	μA	
		DR=320ms		6.5	10	μA	
Standby Current		1		3	μA	When standby mode selected	
Turn On Time			1		ms	Transition time from Standby to Normal mode (When NO moving average selected)	
Shock Durability		5000			G		
Electrical Characteristics							
Rated Acceleration			±2		G		
Output Resolution	±2G		15.6		mg/LSB	8bit output	
		58	64	70	LSB/G	When normal mode selected	
Sampling Frequency		100, 12.5, 6.25, 3.125			Hz	Able to change by register setting	
Serial Interface Specification							
I2C Interface Speed				400	kHz		