

PS/2 Mouse Controller

BU9206

The BU9206 is a PS/2 mouse communication processor for PCs. This processor shapes waveforms and counts signals from the mouse rotary encoder as the mouse is moved, to provide two-way communication between mouse and PC system.

●Application

PC mouse

●Features

- 1) For PS/2 mouse.
- 2) Compatible with a wide range of input signals, because it automatically sets the input threshold levels for the X and Y direction, corresponding to the output level of the rotary encoder inside the mouse.
- 3) CMOS process enables low current consumption.

●Absolute maximum ratings (Ta=25°C)

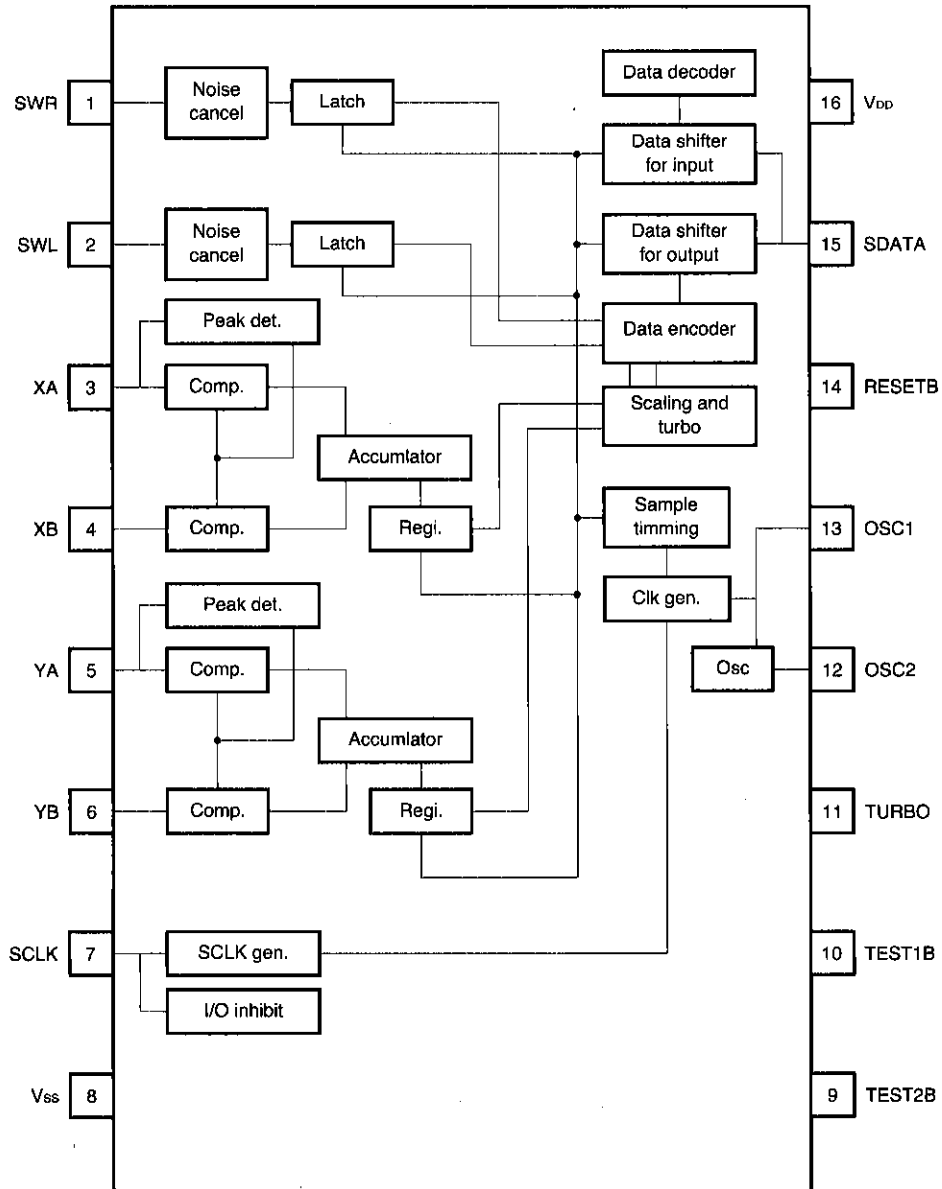
Parameter	Symbol	Limits	Unit
Power supply voltage	V _{DD}	-0.3~7.0	V
Power dissipation	P _d	1000*	mW
Operating temperature	T _{opr}	-25~75	°C
Storage temperature	T _{stg}	-55~125	°C
Input voltage	V _{IN}	-0.3~V _{DD} +0.3	V
Output voltage	V _{OUT}	-0.3~V _{DD} +0.3	V

* Reduced by 10 mW for each increase in Ta of 1°C over 25°C.

●Recommended operating conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Application pin
Power supply voltage	V _{DD}	4.5	5.0	5.5	V	V _{DD}
H input voltage 1	V _{IH1}	0.8 * V _{DD}	—	V _{DD}	V	SWR, SWL, TEST2B, TEST1B, TURBO, RESETB
H input voltage 2	V _{IH2}	0.4 * V _{DD}	—	V _{DD}	V	SCLK, SDATA
L input voltage 1	V _{IL1}	0	—	0.2 * V _{DD}	V	SWR, SWL, TEST2B, TEST1B, TURBO, RESETB
L input voltage 2	V _{IL2}	0	—	0.16 * V _{DD}	V	SCLK, SDATA
XY input H voltage	V _{AUP}	0.3 * V _{DD}	—	0.8 * V _{DD}	V	XA, XB, YA, YB
XY input L voltage	V _{ALP}	0	—	0.48 * V _{AUP}	V	XA, XB, YA, YB

● Block diagram



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● Pin descriptions

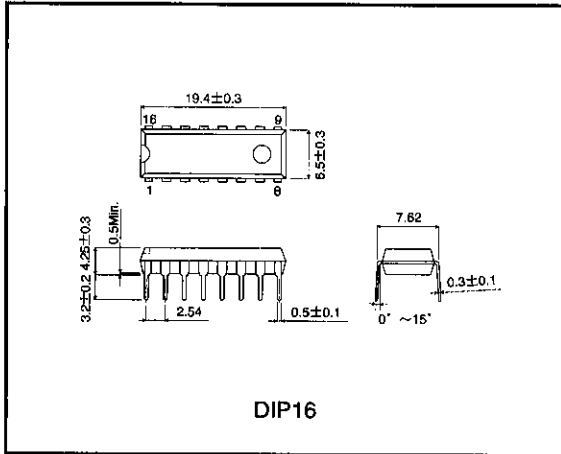
Pin No.	Pin Name	I/O	Function	I/O format
1	SWR	IN	Right switch input Pull-up resistor built in Low active	
2	SWL	IN	Left switch input Pull-up resistor built in Low active	
3	XA	IN	Rotary encoder X-direction, A-phase input	
4	XB	IN	Rotary encoder X-direction, B-phase input	
5	YA	IN	Rotary encoder Y-direction, A-phase input	
6	YB	IN	Rotary encoder Y-direction, B-phase input	
7	SCLK	I/O	Serial clock input/output Pull-up resistor built in Open drain output	
8	V _{SS}	—	Input/output reference voltage: 0 V	—
9	TEST2B	IN	Tip test input Pull-up resistor built in Low active	
10	TEST1B	IN	Normally open or connected to V _{DD}	
11	TURBO	IN	Turbo mode ON/OFF input Pull-up resistor built in	

Pin No.	Pin Name	I/O	Function	I/O format
12	OSC2	IN	Pin to connect oscillator for clock Connect a 4 MHz oscillator between OSC1 and OSC2.	
13	OSC1	OUT		
14	RESETB	IN	Reset input Pull-up resistor built in Low active	
15	SDATA	I/O	Serial data input/output Pull-up resistor built in Open drain output	
16	V _{DD}	—	Power supply pin Connect a 4.5 - 5.5 V power supply.	—

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● External dimensions (Units: mm)



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