



## TND Series

### Low-Side Power Switch for Use in Solenoid, Lamp Drive Applications ExPD(Excellent Power Device)

#### Overview

Sanyo has developed an "ExPD" which supports both higher reliability and increased performance by adopting a unique BID structure developed using its original SIBC process. In particular, the overcurrent protection function achieves increased precision, making the ExPD optimal for use in a broad variety of switching devices such as solenoid drive or lamp drive used in office automation, factory automation, and game products.

#### Features

- N-ch MOSFET built in (Performance of J4/J5 processes) .
- A wide range of protection circuit built in.

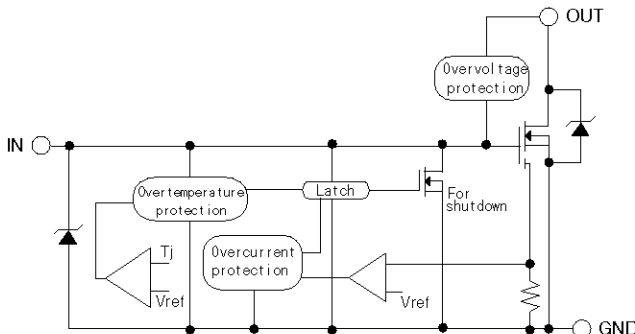
#### Applications

- Lamp drive, solenoid drive, and so on.

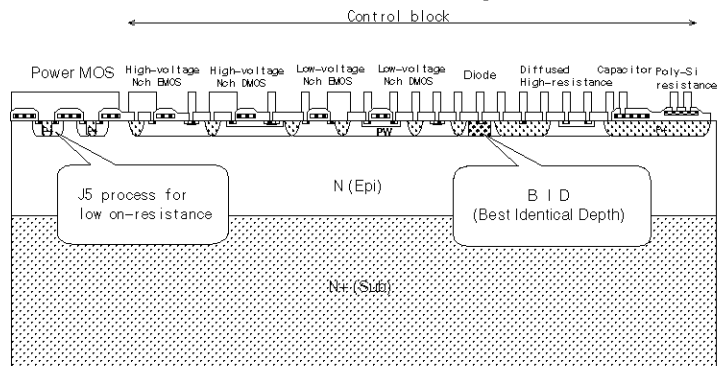
#### Product lineup

Item	Low-side switch					High-side switch
	TND009T	TND010F	TND011NM TND011MP	TND012NM TND012MP	TND013S	TND016B
Rated voltage	50V	50V	60V	60V	30V	60V
Rated current	1 ±0.25A	2 ±0.5A	1.5A	2 ±0.5A	6A	4A
Ron(max)	0.2Ω	0.2Ω	0.5Ω	0.5Ω	0.03Ω	0.075Ω
Protection against						
Overcurrent	○	○	○	○		○
Overtemperature	○	○		○	○	○
Overvoltage	○	○	○	○		○
Package	TP	FLP	NMP MP	NMP MP	SOPB	TO220-5H
ES, MP	Production quantities available				Under development	
Application	Printer		Game		Battery	Printer

#### Block Diagram of the Low-side Switch ExPD



#### Cross-sectional View of the Low-voltage series ExPD



SIBC : (Self Isolated Bi-CMOS)

- The BID structure based on the SIBC process forms low on-resistance power MOSFETs and a wide range of protection circuits on a single chip.
- ExPD : Excellent Power Device
- SIBC : Self Isolated Bi-CMOS
- BID : Best Identical Depth

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