



SANYO Semiconductors

DATA SHEET

ExPD (Excellent Power Device)

TND307TD

General Purpose Driver for PDP Sustain Pulse Drive, Motor Drive, Switching Power Supply, and DC / DC Converter Applications

Features

- Dual inverter.
- Monolithic structure(High voltage CMOS process adopted).
- Withstand voltage of 25V is assured.
- Wide range of operating voltage : 4.5V to 25V.
- Peak output current : 1A.
- Fast switching time(25ns typical at 1000pF load).
- Fully compatible input to TTL/CMOS(VIH=not more than to 2.6V, at VDD=4.5 to 25V).

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Supply Voltage	V _{DD}		0 to 25	V
Input Voltage	V _{IN}		GND-0.3 to V _{DD} +0.3	V
Allowable Power Dissipation	P _D max		0.25	W
Junction Temperature	T _J		-55 to +150	°C
Storage Temperature	T _{STG}		-55 to +150	°C

Recommended Operating Conditions at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Operating Supply Voltage	V _{DD}		4.5 to 25	V
Operating Temperature	Topr		-40 to +125	°C

Electrical Characteristics (AC Characteristics) at Ta=25°C, V_{DD}=18V, V_{IN}=5V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-On Rise Time	t _r	C _L =1000pF		30	45	ns
Turn-Off Fall Time	t _f	C _L =1000pF		30	45	ns
Delay Time	t _{D1}	C _L =1000pF		25	40	ns
	t _{D2}	C _L =1000pF		45	60	ns

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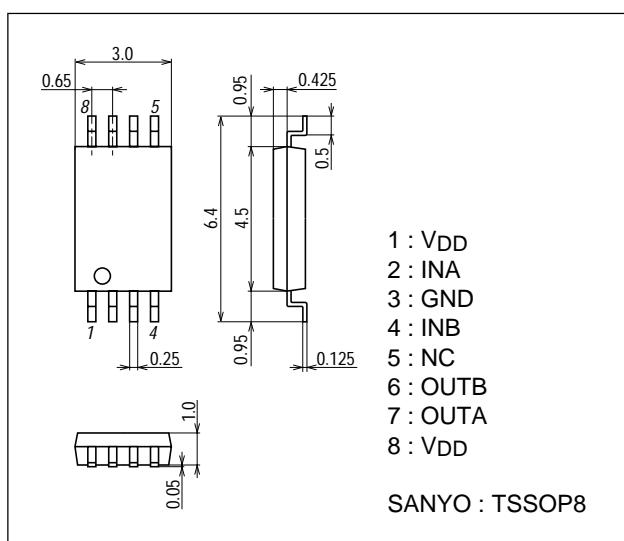
Electrical Characteristics (DC Characteristics) at $T_a=25^\circ\text{C}$, $V_{DD}=4.5$ to 25V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Logic "1" Input Voltage	V_{IH}		2.6			V
Logic "0" Input Voltage	V_{IL}				0.8	V
Input Bias Current	I_{IN}	$V_{IN}=0$ or V_{DD}	-1		1	μA
High Level Output Voltage	V_{OH}	$I_O=0$	$V_{DD}-0.1$			V
Low Level Output Voltage	V_{OL}	$I_O=0$			0.1	V
V_{DD} Supply Current	I_{supp}	$V_{DD}=10\text{V}$, $V_{IN}=3\text{V}$, (both inputs)		1.0	4.5	mA
		$V_{DD}=10\text{V}$, $V_{IN}=0$, (both inputs)			0.2	mA
Output High Short Circuit Pulse Current	I_{O+}	$V_{DD}=18\text{V}$, $PW \leq 10\mu\text{s}$, $V_{OUT}=0$		1.0		A
Output Low Short Circuit Pulse Current	I_{O-}	$V_{DD}=18\text{V}$, $PW \leq 10\mu\text{s}$, $V_{OUT}=18\text{V}$		1.0		A
Output On Resistance	R_{OUT}	$V_{DD}=18\text{V}$, $I_{load}=10\text{mA}$, $V_{OUT}=\text{"H"}$		8	12	Ω
		$V_{DD}=18\text{V}$, $I_{load}=10\text{mA}$, $V_{OUT}=\text{"L"}$		6	10	Ω

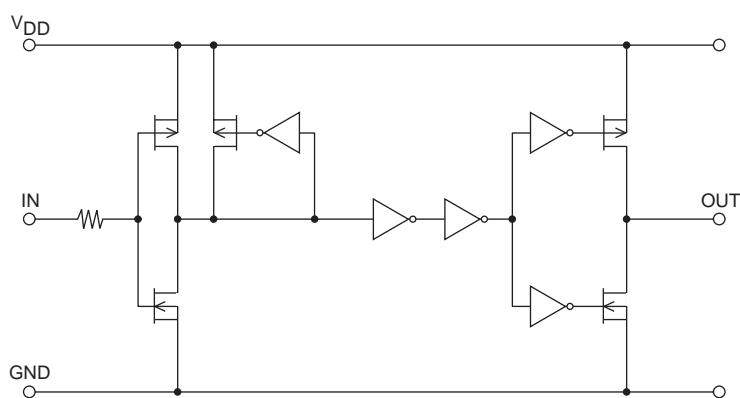
Package Dimensions

unit : mm

2234

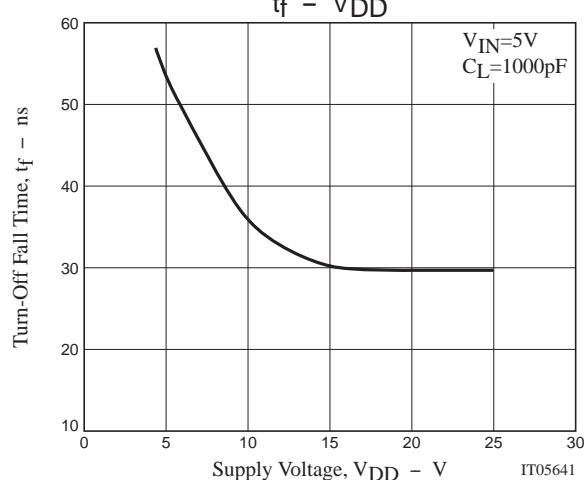
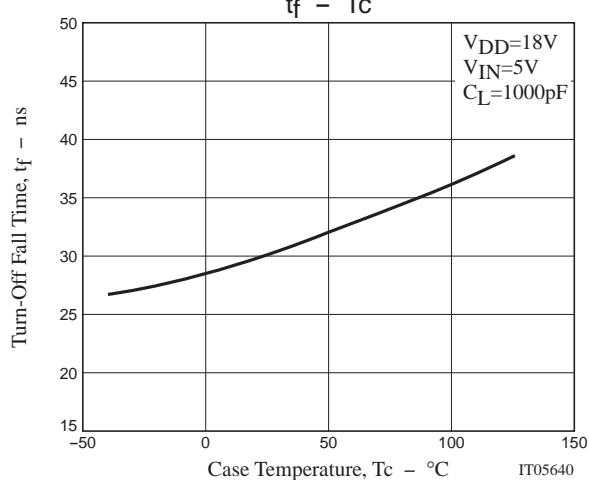
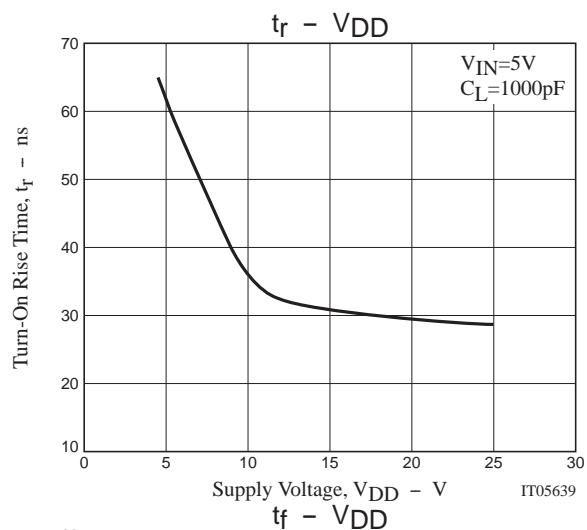
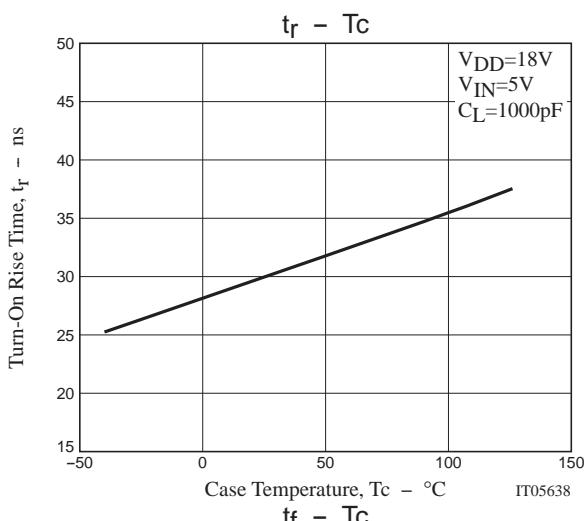
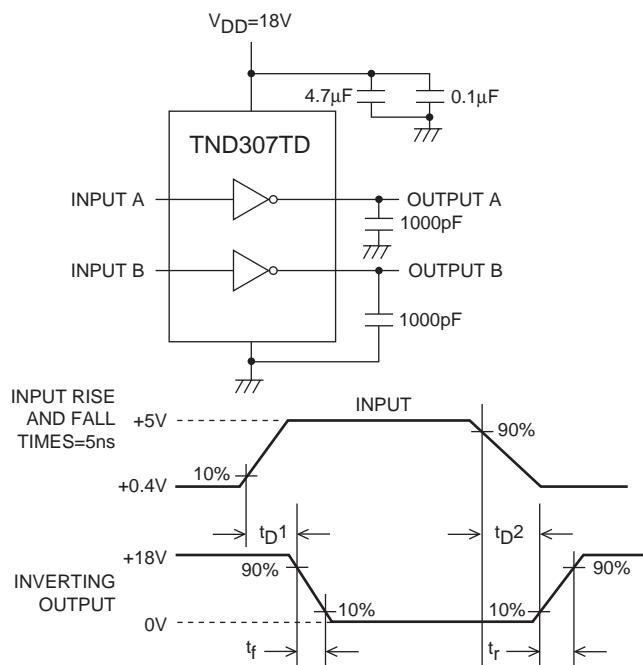


Block Diagram

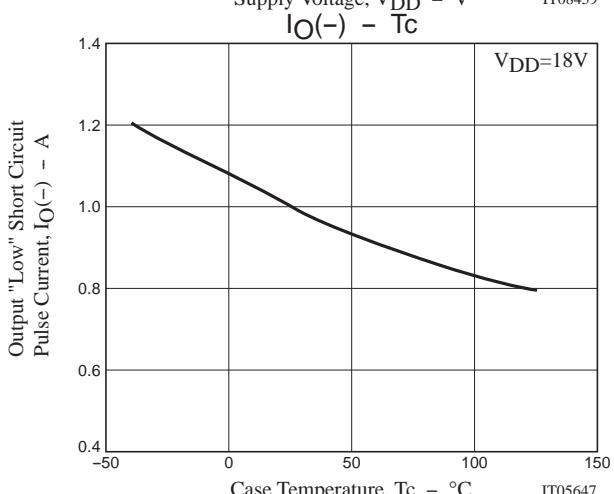
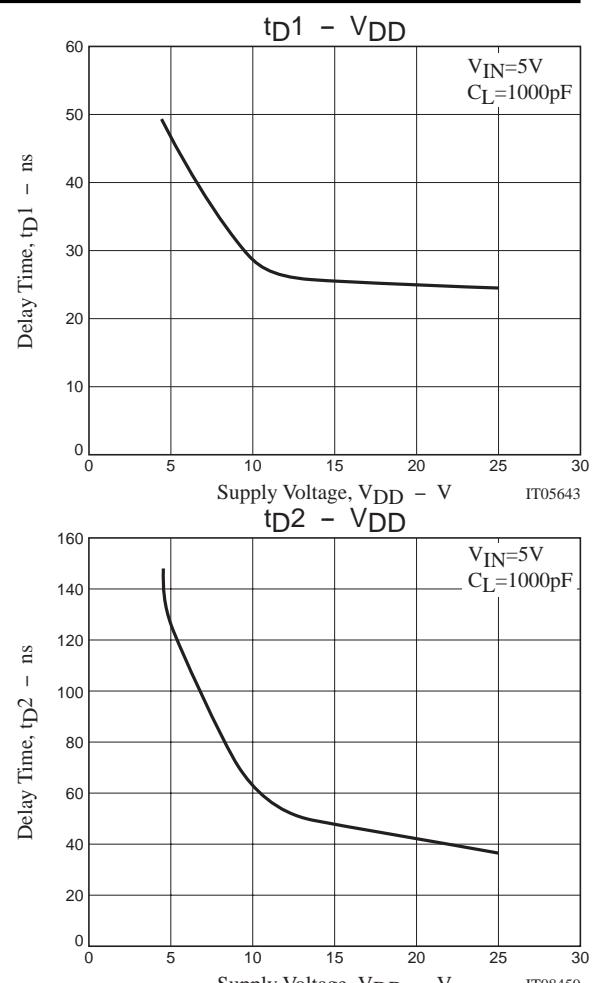
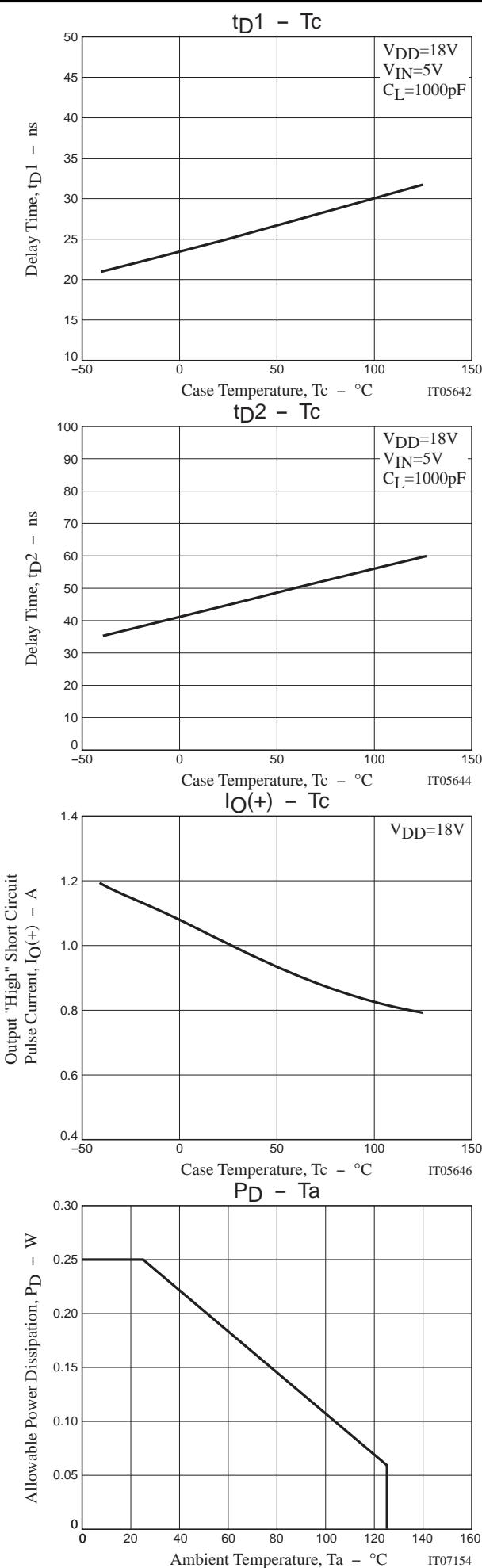


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Switching Time Test Circuit



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