


SANYO Semiconductors

DATA SHEET

TND332ST — ExPD(Excellent Power Device) General Purpose Driver for PDP Sustain Pulse Drive, Motor Drive, Switching Power Supply, and DC / DC Converter Applications

Features

- Three phase buffer.
- 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.
- Fully compatible input to TTL / CMOS (V_{IH} =up to 3.0V, at V_{DD} =4.5 to 25V).
- Built-in input pull-down resistance.

Specifications

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

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	$P_{D\ max}$		0.3	W
Junction Temperature	T_j		-55 to +150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Recommend Operating Conditions at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Operating Supply Voltage	V_{DD}		4.5 to 25	V
Operating Temperature	T_{opr}		-40 to +125	$^\circ\text{C}$

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TND332ST

AC Characteristics at Ta=25°C, VDD18V, VIN=5V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Rise Time	t_r	$C_L=1000\text{pF}$		30	45	ns
Turn-OFF Fall Time	t_f	$C_L=1000\text{pF}$		30	45	ns
Delay Time	t_{D1}	$C_L=1000\text{pF}$		30	45	ns
	t_{D2}	$C_L=1000\text{pF}$		45	60	ns

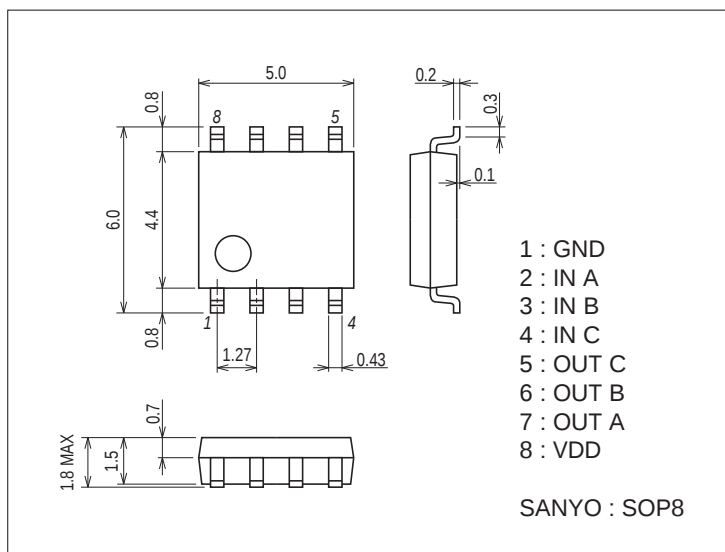
DC Characteristics at Ta=25°C, VDD=4.5 to 25V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Logic "1" Input Voltage	V_{IH}		3.0			V
Logic "0" Input Voltage	V_{IL}				0.8	V
Logic "1" Input Bias Current	I_{IN+}	$V_{IN}=V_{DD}=25\text{V}$		40	100	μA
Logic "0" Input Bias Current	I_{IN-}	$V_{IN}=0\text{V}$ or V_{DD}	-1		1	μA
High-level Output Voltage	V_{OH}	$I_O=0\text{A}$	$V_{DD}-0.1$			V
Low-level Output Voltage	V_{OL}	$I_O=0\text{A}$			0.1	V
V_{DD} Supply Current	I_{supp}	$V_{DD}=10\text{V}$, $V_{IN}=3\text{V}$ (all inputs)		1.0	4.5	mA
		$V_{DD}=10\text{V}$, $V_{IN}=0\text{V}$ (all inputs)			0.2	mA
Output High Short Circuit Pulsed Current	I_{O+}	$V_{DD}=18\text{V}$, $PW \leq 10\mu\text{s}$, $V_{OUT}=0\text{V}$		1.0		A
Output Low Short Circuit Pulsed 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

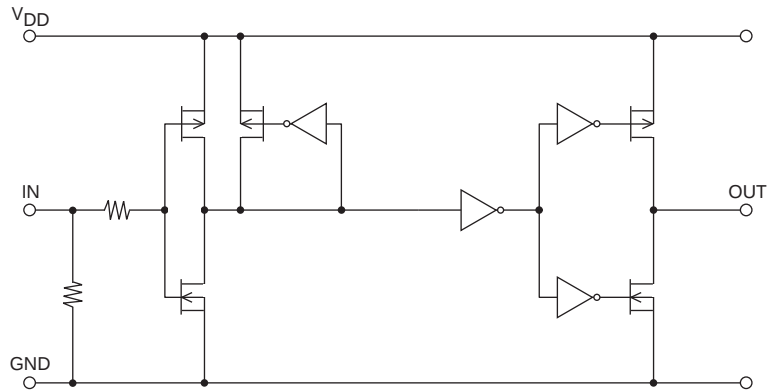
unit : mm (typ)

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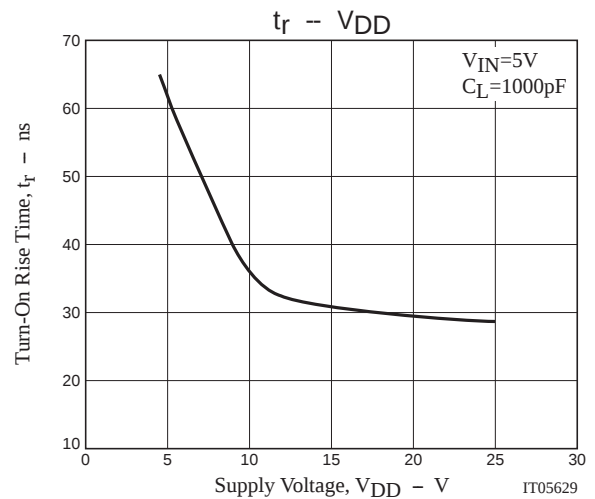
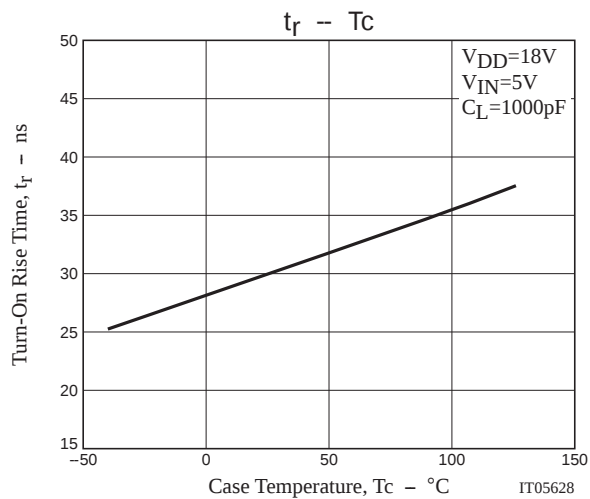
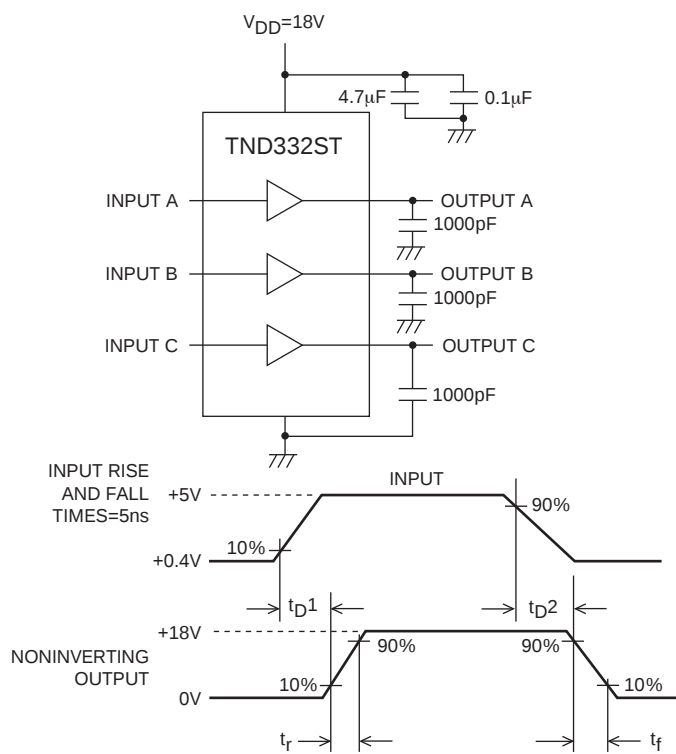


TND332ST

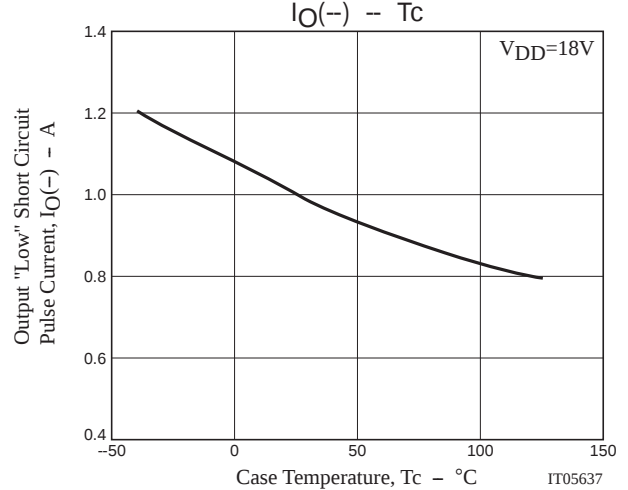
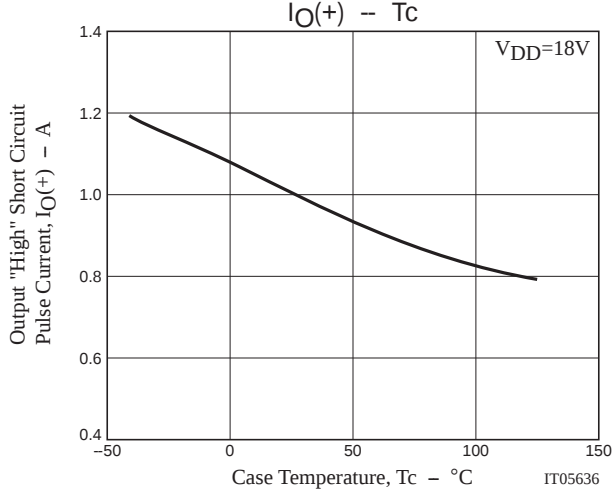
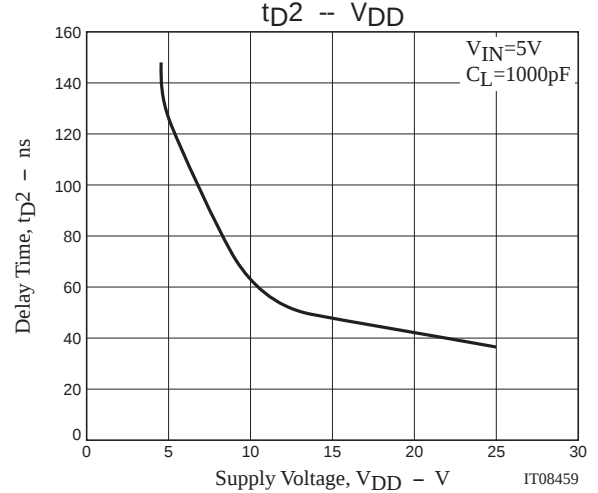
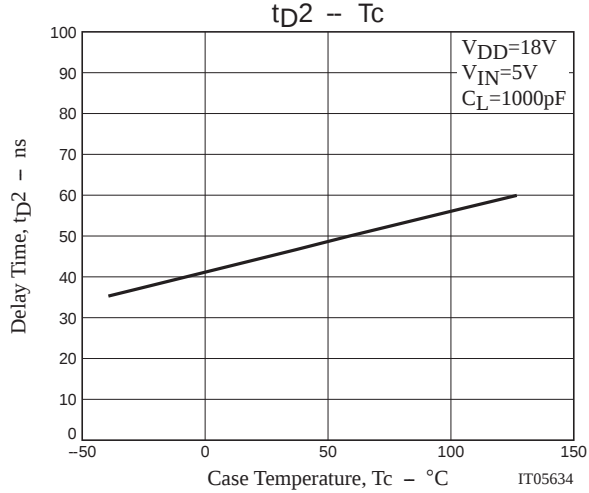
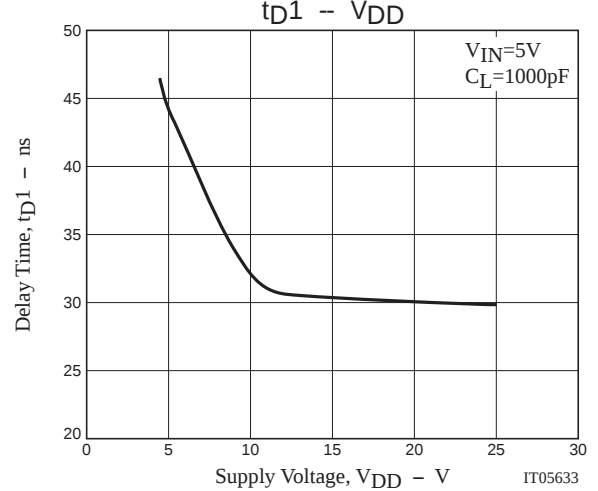
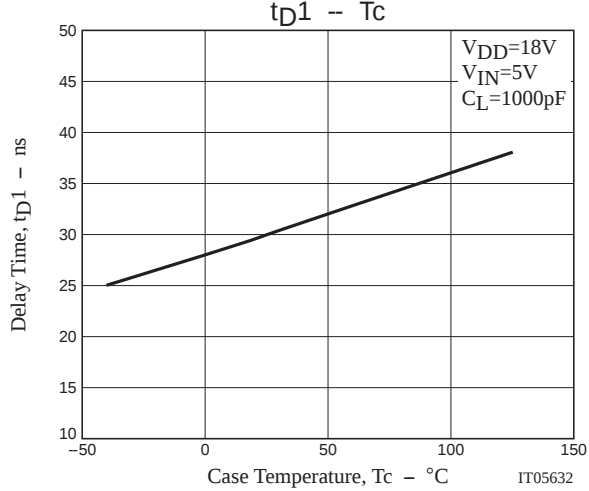
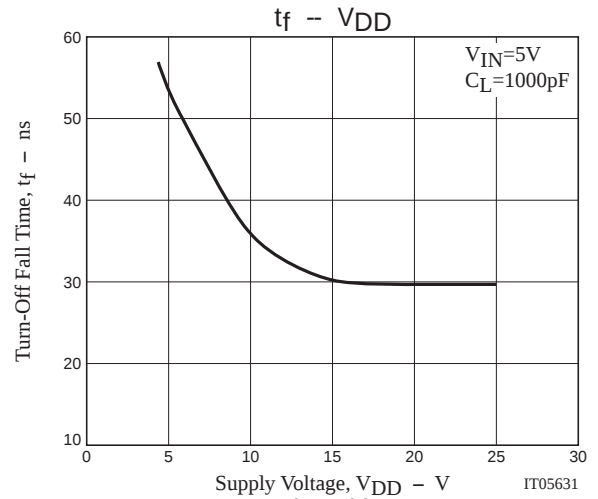
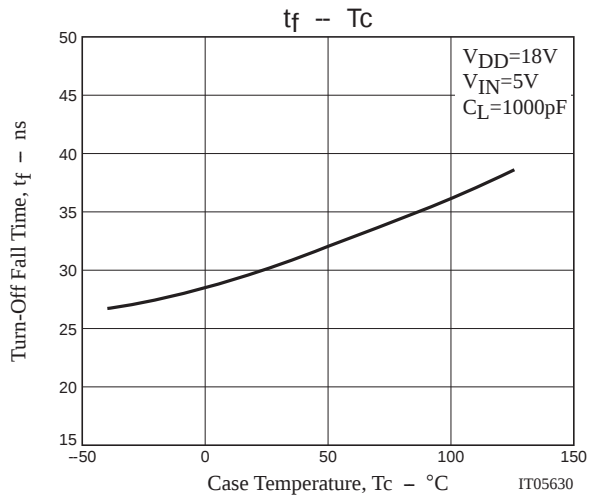
Block Diagram

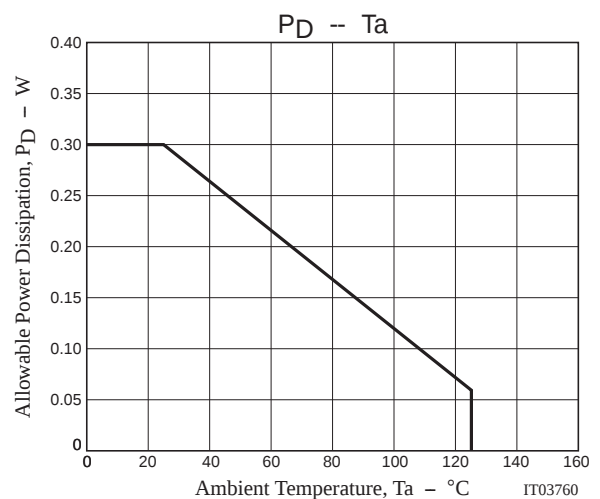
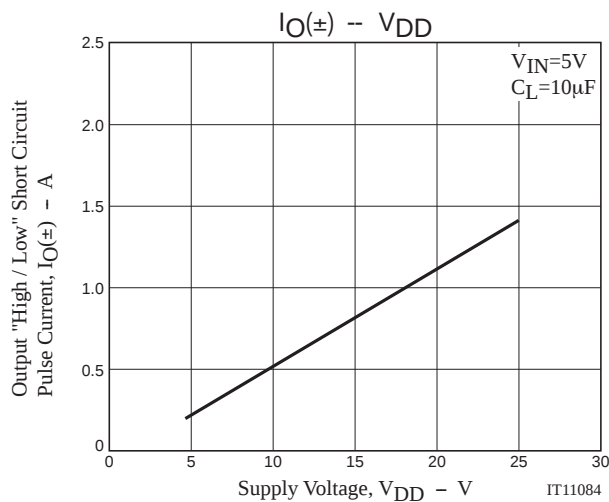


Switching Time Test Circuit



TND332ST





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