TND322VD

Excellent Power Device

Dual buffer driver for general purpose

ON Semiconductor®

www.onsemi.com

Features

- Dual 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 : I_O+/I_O- =0.8A /1A
- Fast switching time (30ns typical at 1000pF load)
- Fully compatible input to TTL / CMOS (V_{IH}=up to 2.6V, at V_{DD}=4.5 to 25V)
- Built-in input pull-down resistance

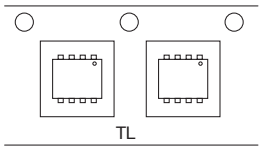
Specifications

Absolute Maximum Ratings at Ta=25°C

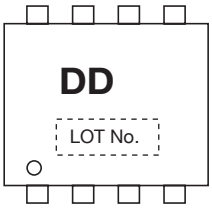
Parameter	Symbol	Conditions	Ratings	Unit
Supply Voltage	V_{DD}		0 to 25	V
Input Voltage	V_{IN}		GND−0.3 to V_{DD}+0.3	V
Allowable Power Dissipation	P_D max		0.2	W
Junction Temperature	Tj		−55 to +150	°C
Storage Temperature	Tstg		−55 to +150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

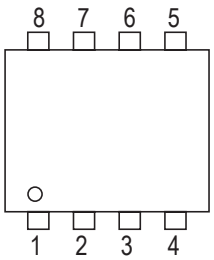
Packing Type : TL



Marking



Pin Assignment



Top View

SOT-28FL / VEC8

TND322VD-TL-E
TND322VD-TL-H

1 : INA
2 : OUTA
3 : OUTB
4 : INB
5 : GND
6 : VDD
7 : VDD
8 : VDD

ORDERING INFORMATION

See detailed ordering and shipping information on page 7 of this data sheet.

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Publication Order Number:
TND322VD/D

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Recommend 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

Functional operation above the stresses listed in the Recommended Operating Ranges is not implied. Extended exposure to stresses beyond the Recommended Operating Ranges limits may affect device reliability.

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	CL=1000pF		35	50	ns
Turn-Off Fall Time	t_f	CL=1000pF		30	45	ns
Delay Time	t_D1	CL=1000pF		30	45	ns
	t_D2	CL=1000pF		45	60	ns

Electrical Characteristics (DC Characteristics) at Ta=25°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
Logic “1” Input Bias Current	$I_{IN}+$	V_{IN}=V_{DD}=25V		40	100	μA
Logic “0” Input Bias Current	$I_{IN}-$	V_{IN}=0V	−1		1	μA
High-level Output Voltage	V_{OH}	I_O=0A	V_{DD}−0.1			V
Low-level Output Voltage	V_{OL}	I_O=0A			0.1	V
V_{DD} Supply Current	Isupp	V_{DD}=10V, V_{IN}=3V, (both inputs)		1.0	4.5	mA
		V_{DD}=10V, V_{IN}=0V, (both inputs)			0.2	mA
Output High Short Circuit Pulsed Current	I_O+	V_{DD}=18V, PW≤10μs, V_{OUT}=0V		0.8		A
Output Low Short Circuit Pulsed Current	I_O-	V_{DD}=18V, PW≤10μs, V_{OUT}=18V		1.0		A
Output On Resistance	ROUT	V_{DD}=18V, Iload=10mA, V_{OUT}=“H”		11	16.5	Ω
		V_{DD}=18V, Iload=10mA, V_{OUT}=“L”		6	10	Ω

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

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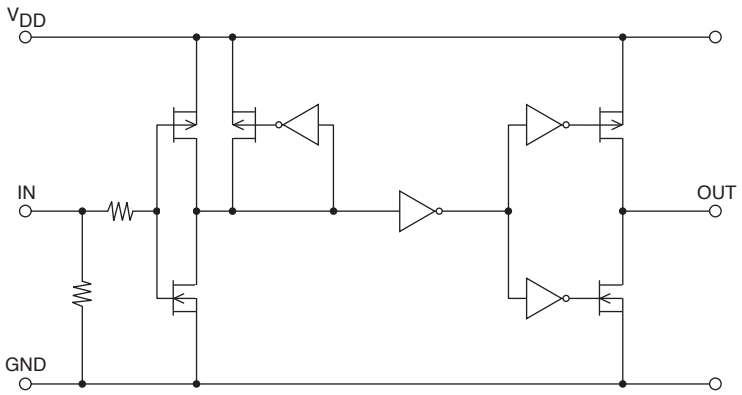
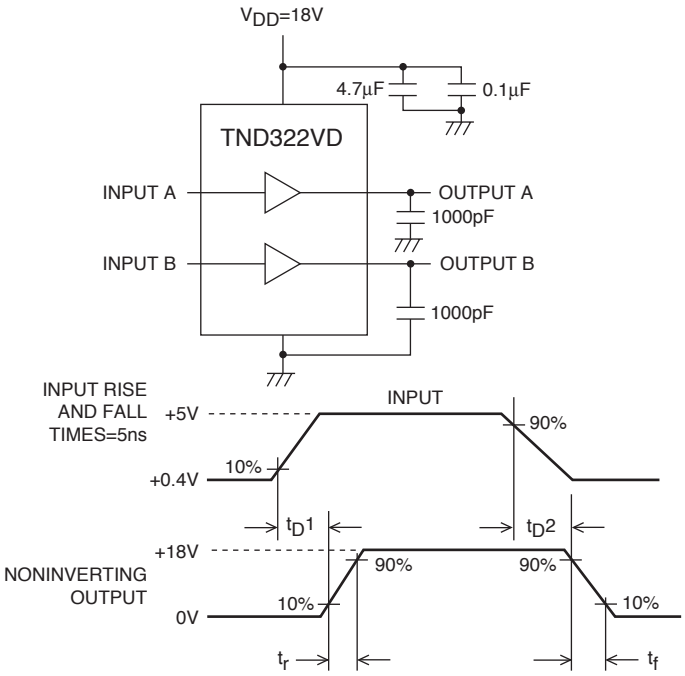
Block Diagram



Switching Time Test Circuit



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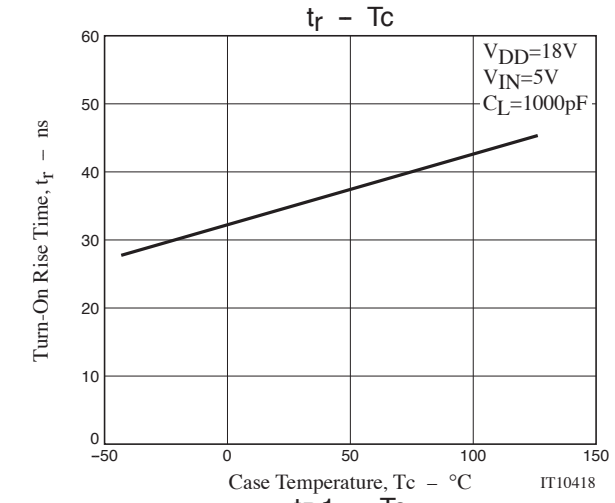

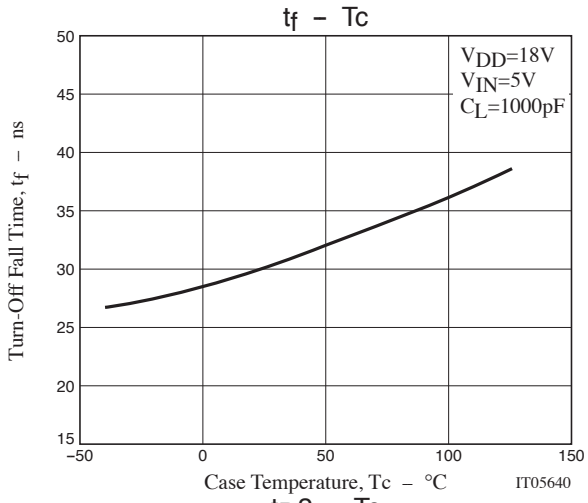

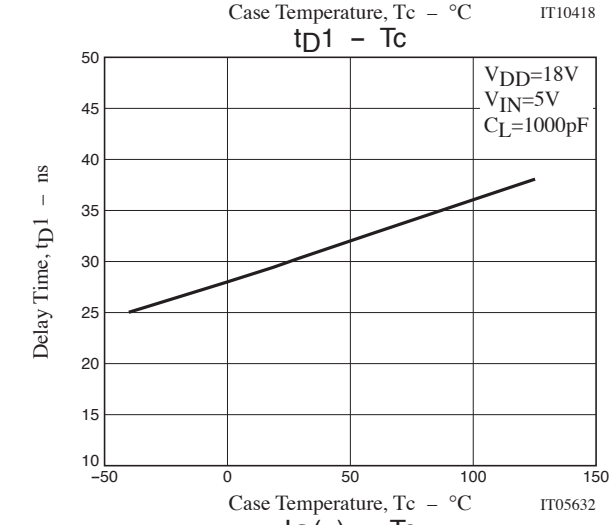

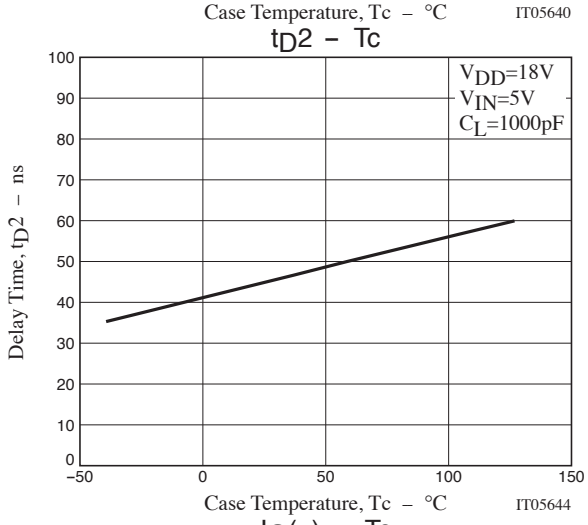

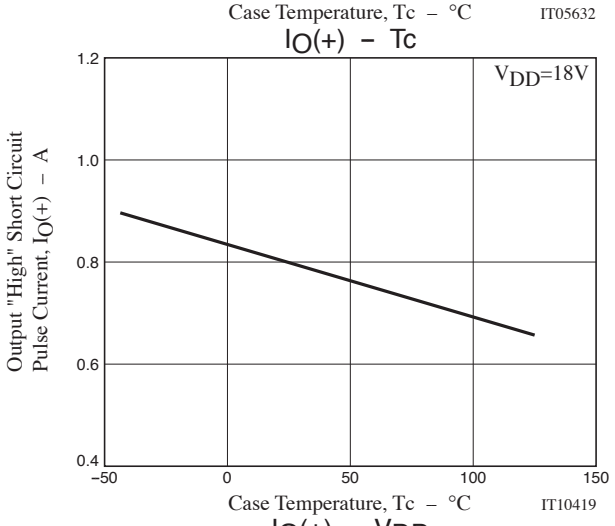

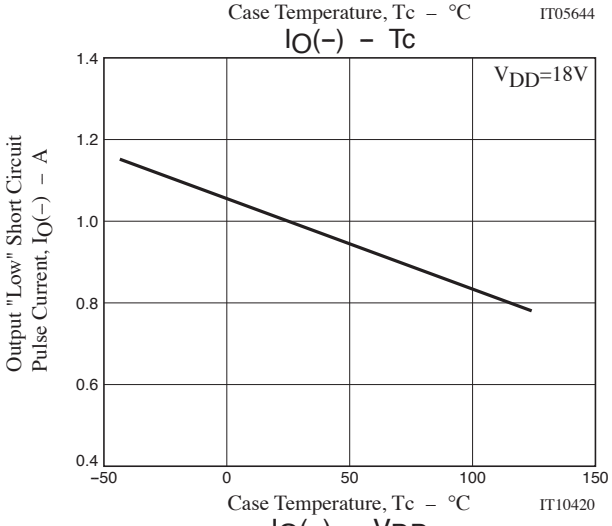

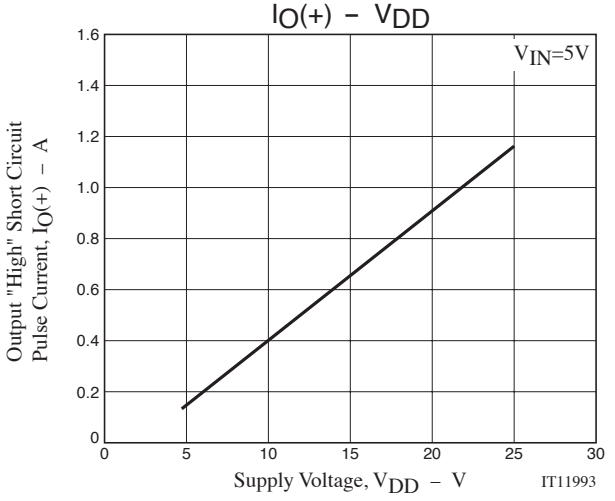

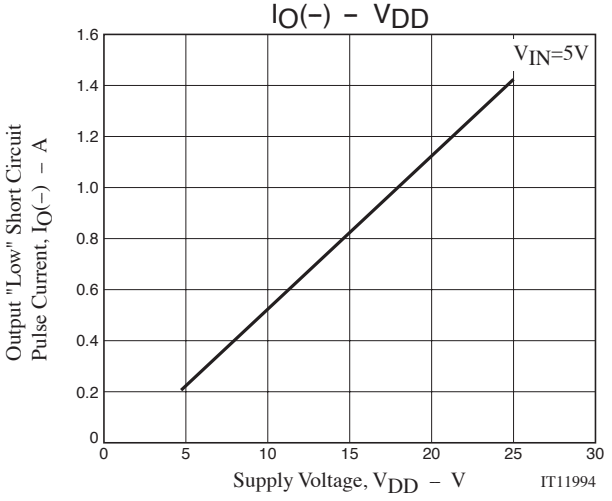

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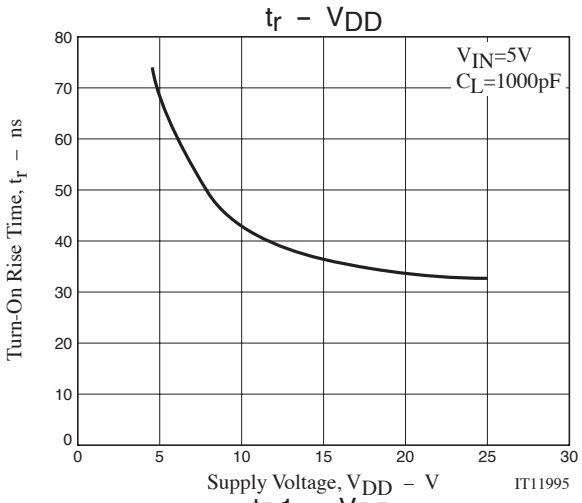

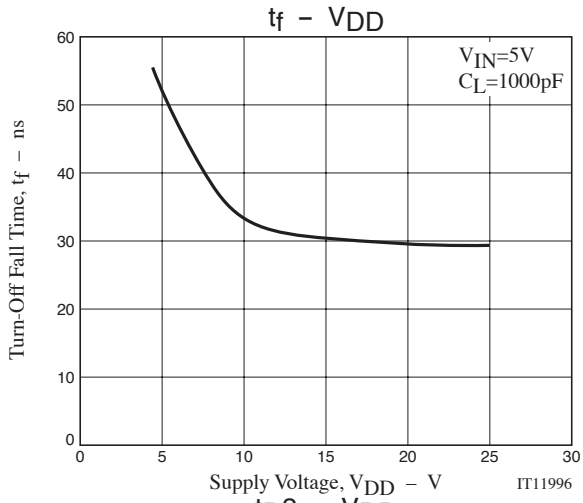

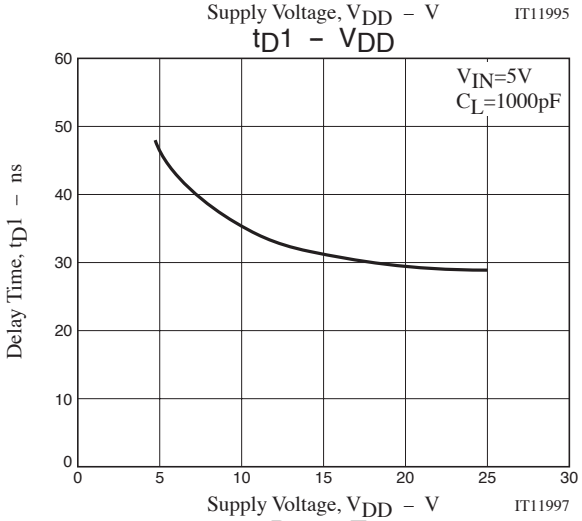

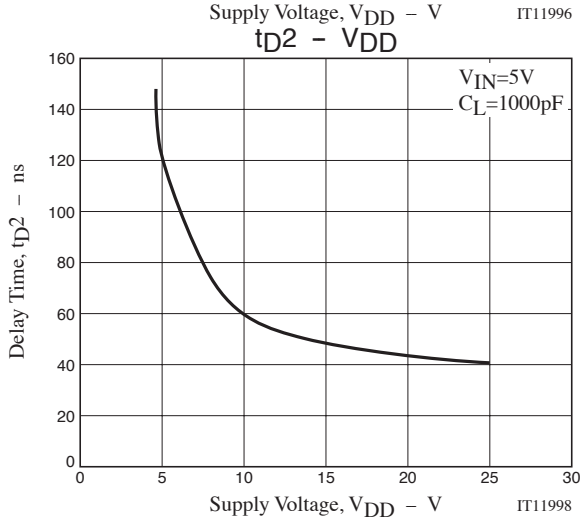

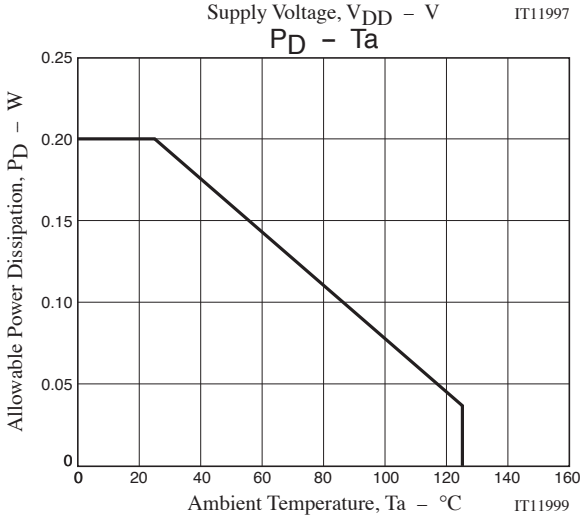

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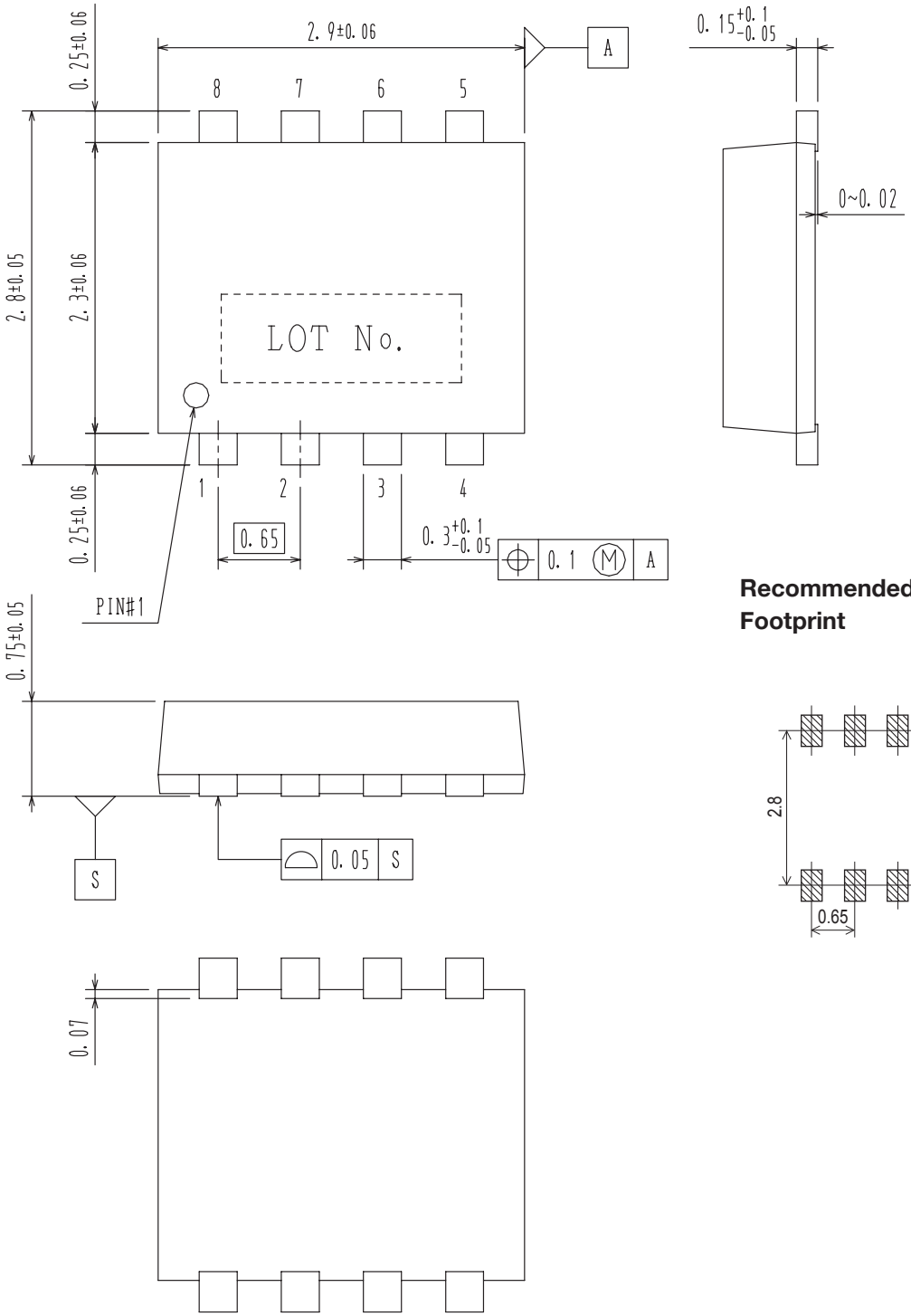
Package Dimensions

unit : mm

TND322VD-TL-E, TND322VD-TL-H

SOT-28FL / VEC8
CASE 318AH
ISSUE O



1 : INA
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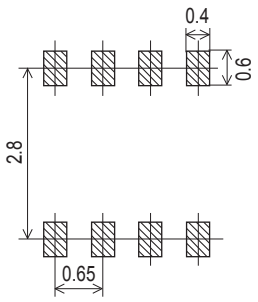
Recommended Soldering Footprint



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ORDERING INFORMATION

Device	Package	Shipping	memo
TND322VD-TL-E	SOT-28FL / VEC8	3,000pcs. / Tape and Reel	Pb-Free
TND322VD-TL-H	SOT-28FL / VEC8	3,000pcs. / Tape and Reel	Pb-Free and Halogen Free

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