



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

TND322VD — ExPD (Excellent Power Device) General Purpose Driver for PDP Sustain Pulse Drive, Motor Drive, Switching Power Supply, and DC / DC Converter Applications

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

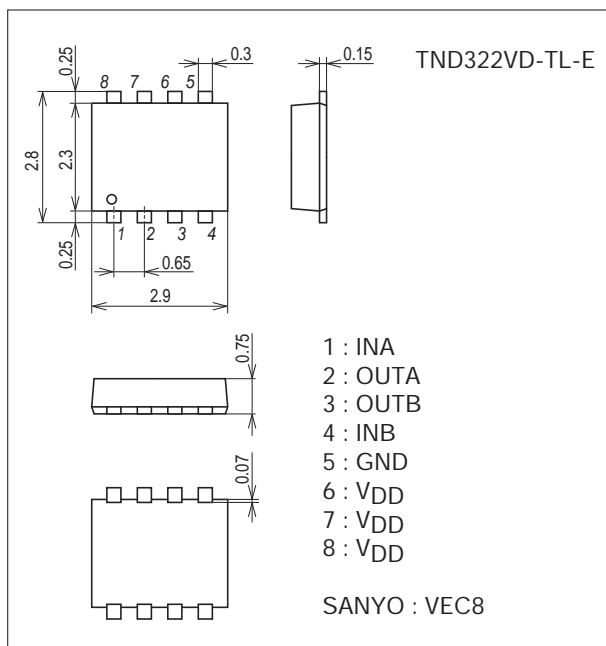
Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

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

Package Dimensions

unit : mm (typ)

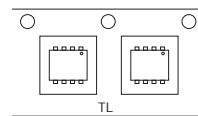
7012-006



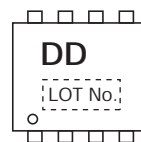
Product & Package Information

- Package : VEC8
- JEITA, JEDEC : -
- Minimum Packing Quantity : 3,000 pcs./reel

Packing Type : TL



Marking



TND322VD

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

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

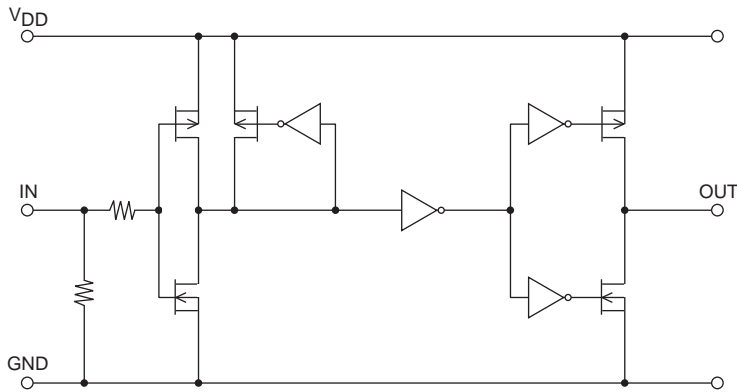
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-On Rise Time	t _r	CL=1000pF		35	50	ns
Turn-Off Fall Time	t _f	CL=1000pF		30	45	ns
Delay Time	t _{D1}	CL=1000pF		30	45	ns
	t _{D2}	CL=1000pF		45	60	ns

Electrical Characteristics (DC Characteristics) at Ta=25°C, V_{DD}=4.5 to 25V

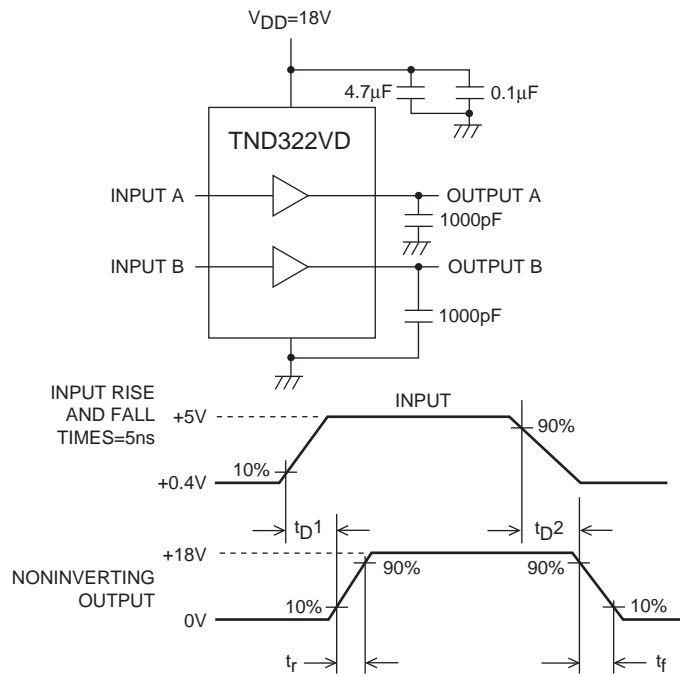
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Logic "1" Input Voltage	V _{IH}		2.6			V
Logic "0" Input Voltage	V _{IL}				0.8	V
Logic "1" Input Bias Current	I _{IN+}	V _{IN} =V _{DD} =25V		40	100	μA
Logic "0" Input Bias Current	I _{IN-}	V _{IN} =0V	-1		1	μA
High-level Output Voltage	V _{OH}	I _O =0A	V _{DD} -0.1			V
Low-level Output Voltage	V _{OL}	I _O =0A			0.1	V
V _{DD} Supply Current	I _{supp}	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 _O UT=0V		0.8		A
Output Low Short Circuit Pulsed Current	I _{O-}	V _{DD} =18V, PW≤10μs, V _O UT=18V		1.0		A
Output On Resistance	R _{OUT}	V _{DD} =18V, I _{load} =10mA, V _O UT="H"		11	16.5	Ω
		V _{DD} =18V, I _{load} =10mA, V _O UT="L"		6	10	Ω

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Block Diagram



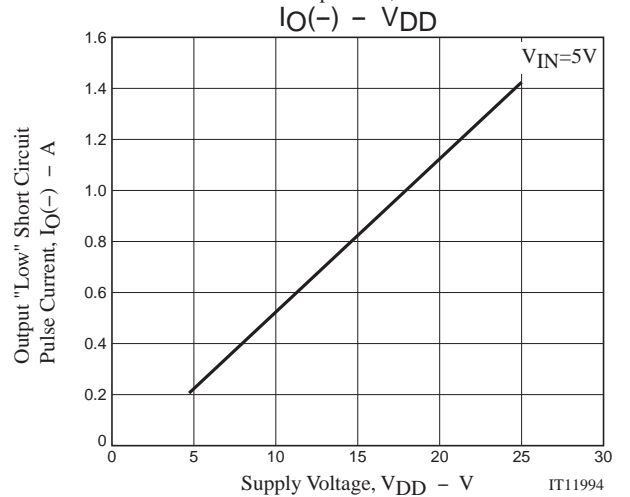
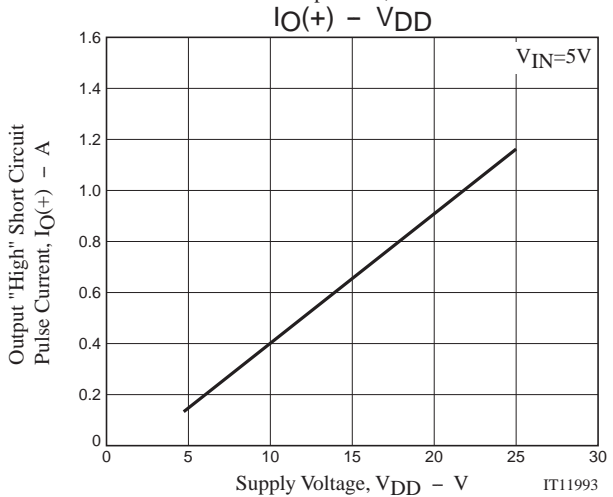
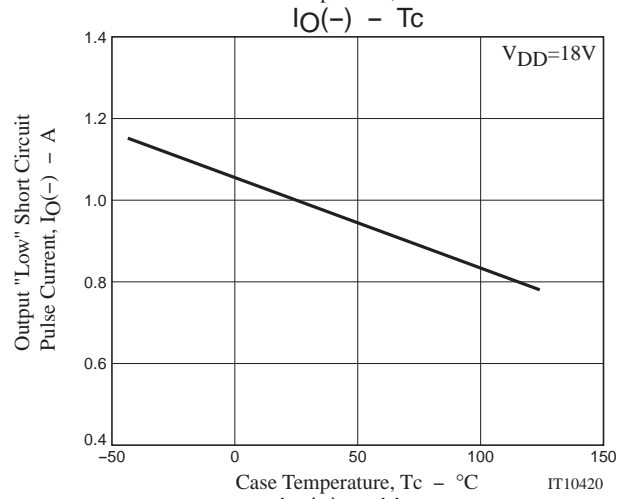
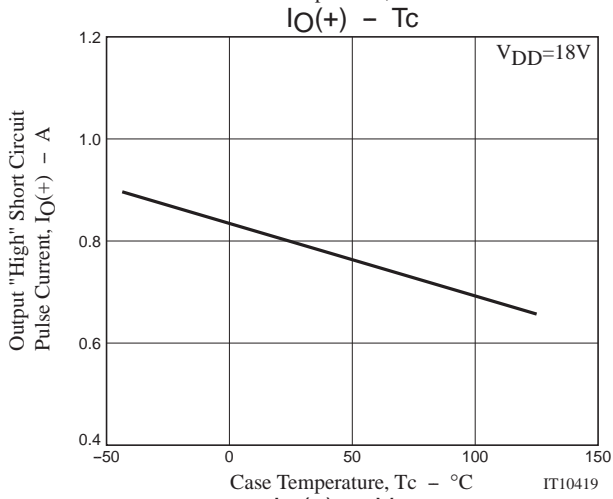
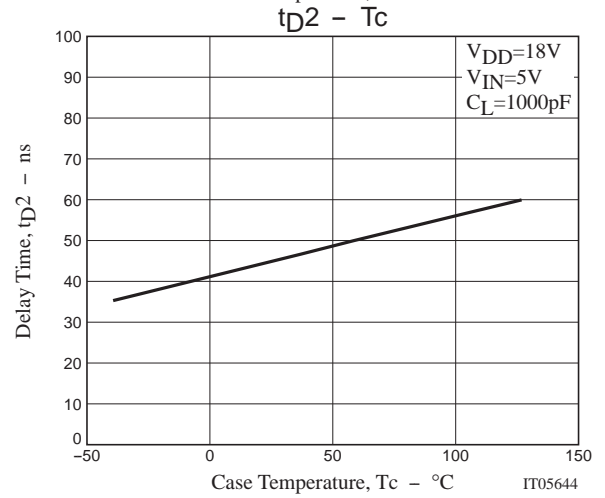
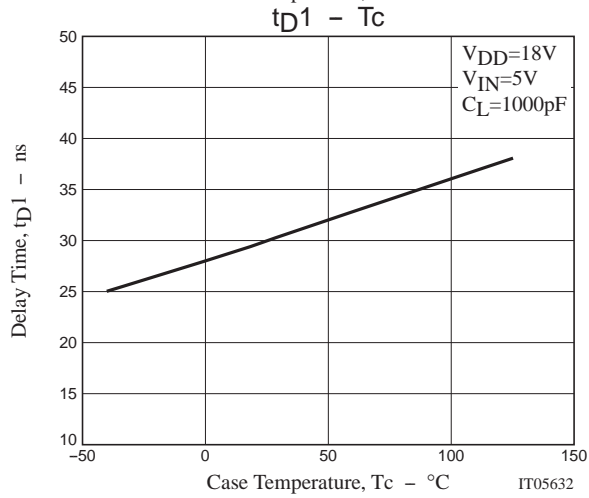
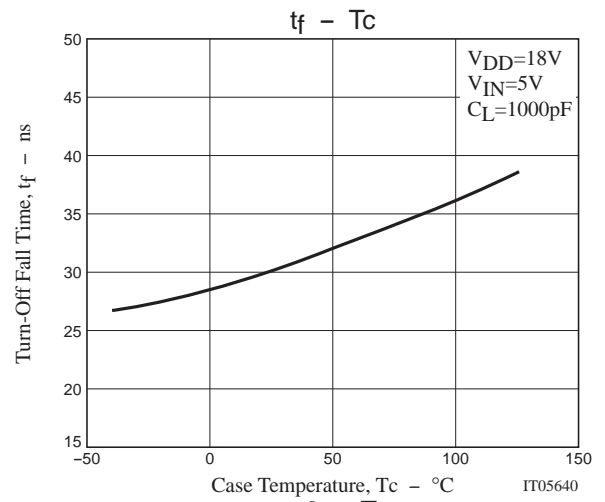
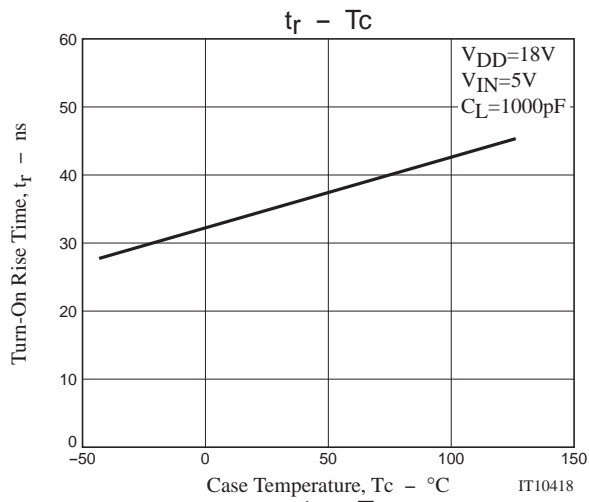
Switching Time Test Circuit



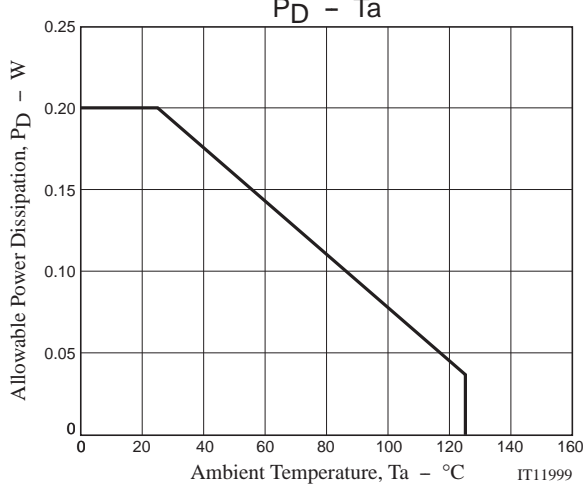
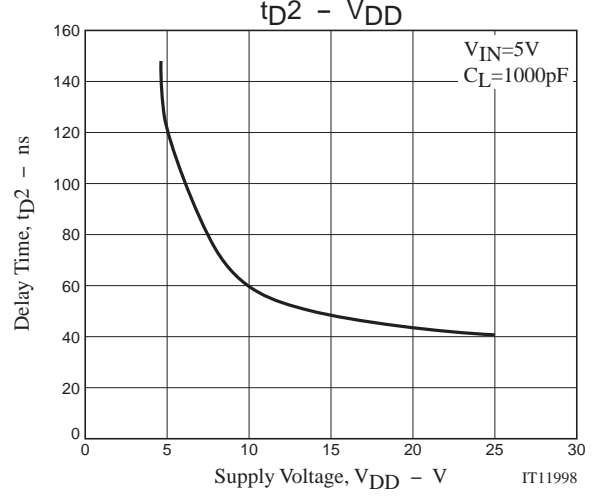
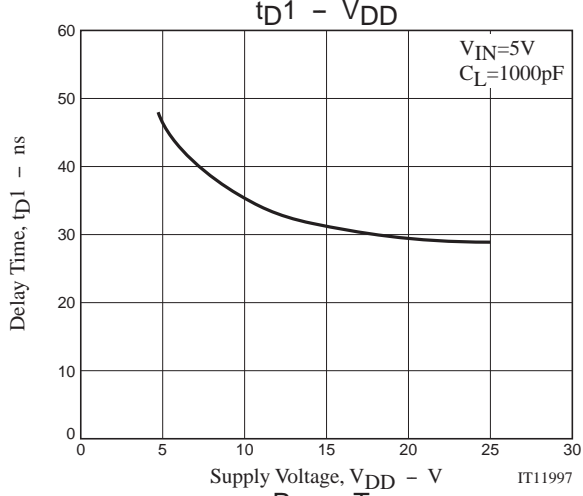
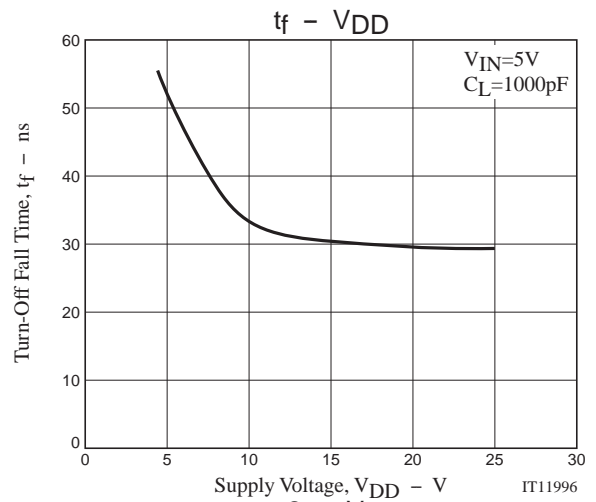
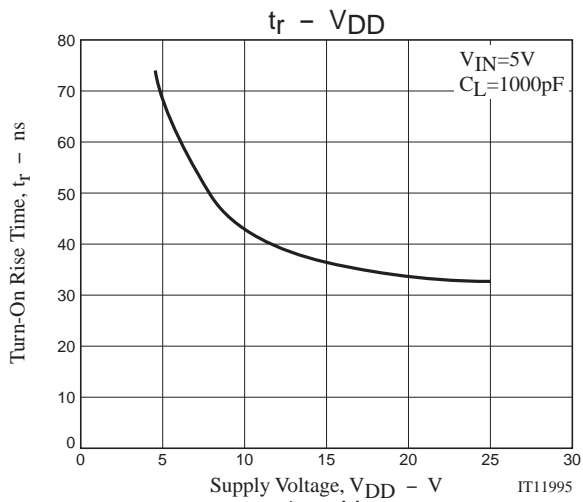
Ordering Information

Device	Package	Shipping	memo
TND322VD-TL-E	VEC8	3,000pcs./reel	Pb Free

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TND322VD

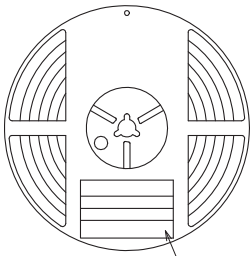
Taping Specification

TND322VD-TL-E

1. Packing Format

Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1) Dimensions:mm (external) 183×72×185	Outer BOX (A-7) Dimensions:mm (external) 440×195×210
VEC8	CPH6	3,000	15,000	90,000	5 reels contained	6 inner boxes contained

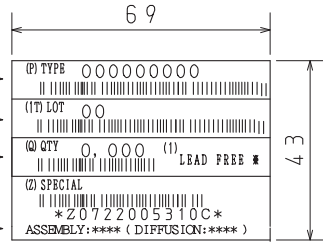
Packing method



Reel label

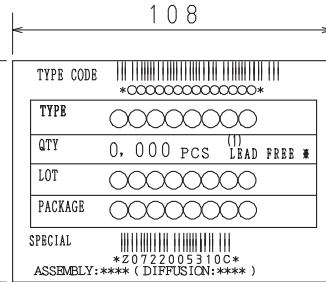
Type No.
LOT No.
Quantity
Origin

Reel label, Inner box label
(unit:mm)



Outer box label

It is a label at the time of factory shipments. The form of a label may change in physical distribution process.



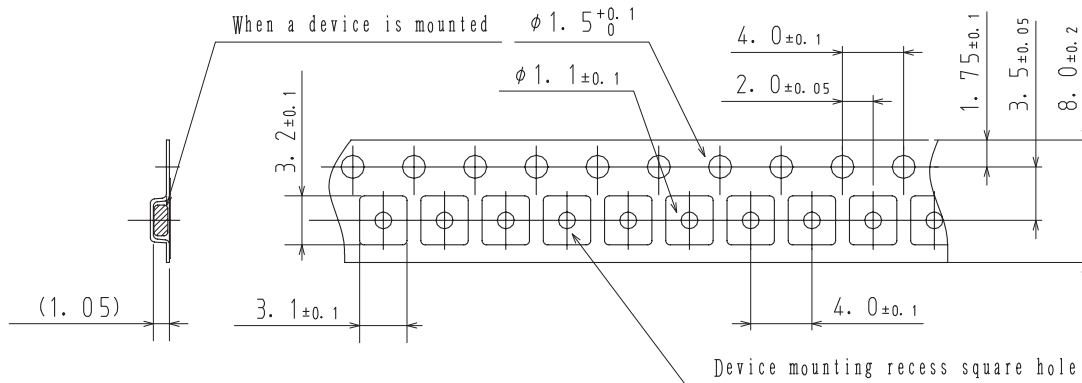
NOTE (1)

The LEAD FREE * description shows that the surface treatment of the terminal is lead free.

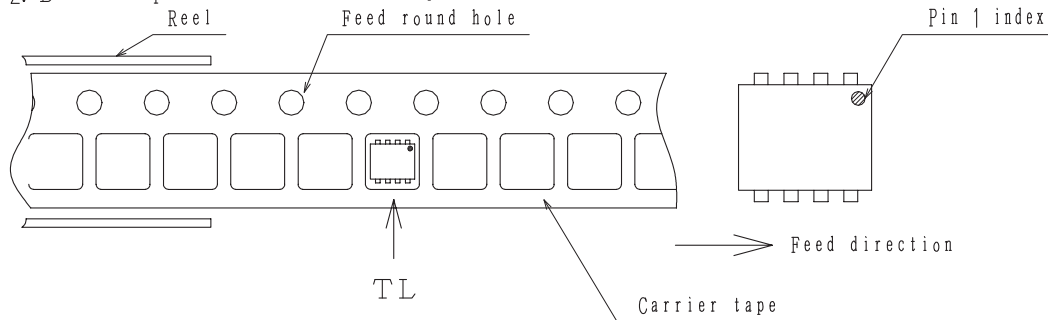
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

2-1. Carrier tape size (unit:mm)



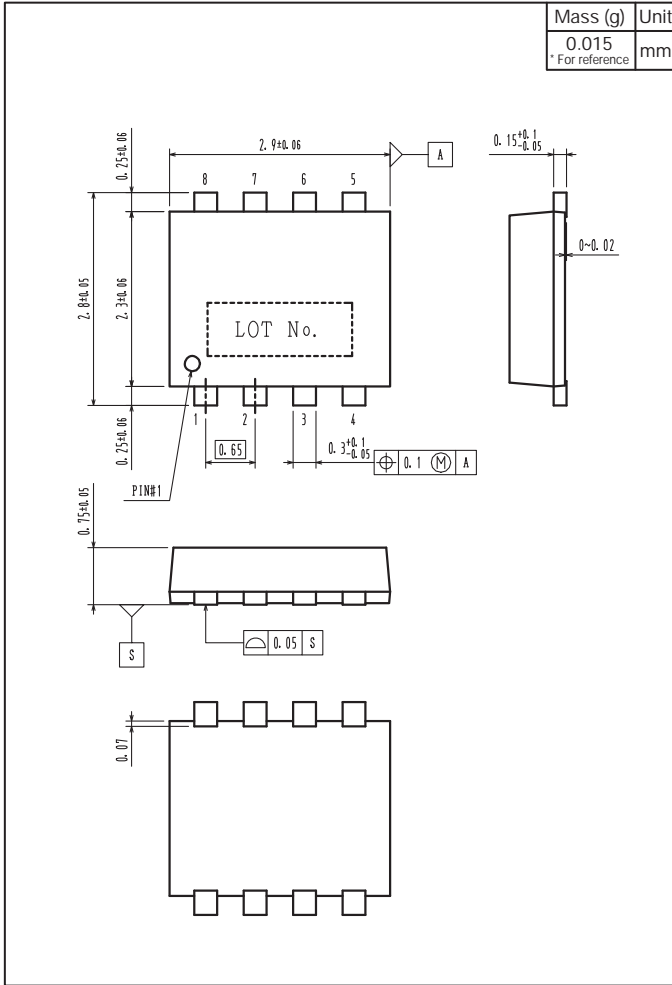
2-2. Device placement direction



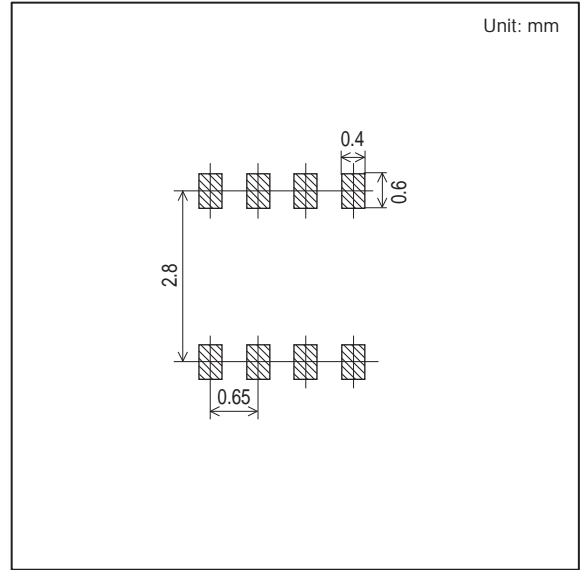
Those with oen electrode terminal on the feed hole side.....TL

TND322VD

Outline Drawing TND322VD-TL-E



Land Pattern Example



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