



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## UD0506T — Diffused Junction Silicon Diode Low VF Switching Diode

### Features

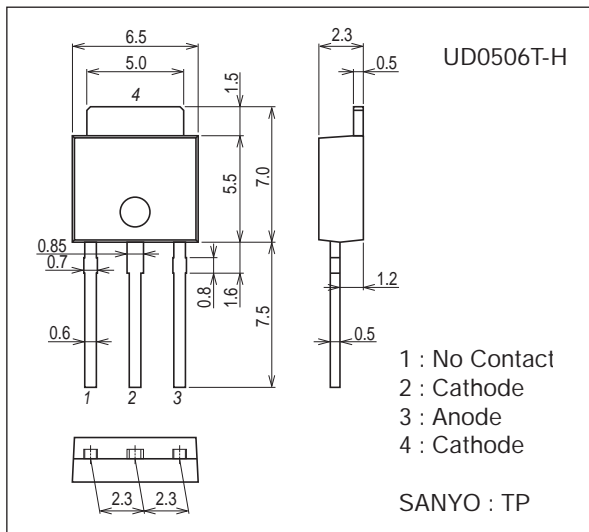
- High breakdown voltage ( $V_{RRM}=600V$ )
- Low noise at the time of reverse recovery
- Halogen free compliance
- Fast reverse recovery time
- Low forward voltage ( $V_F \text{ max}=1.3V$ )

### Specifications

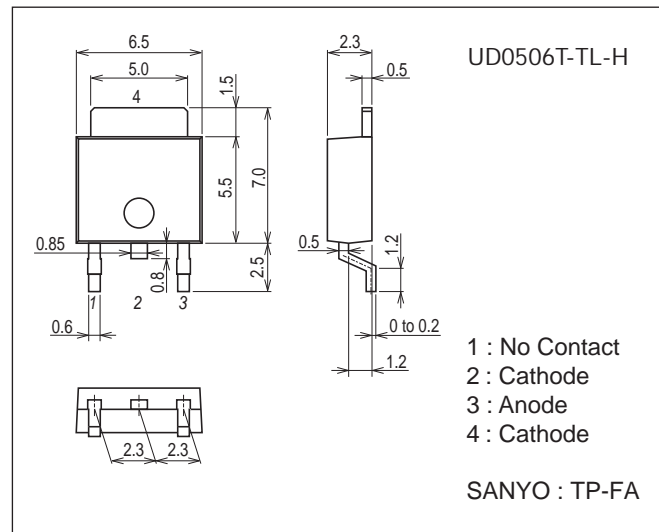
Absolute Maximum Ratings at  $T_a=25^\circ C$

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$		600	V
Average Output Current	$I_O$		5	A
Surge Forward Current	$I_{FSM}$	Sine wave 10ms	40	A
Junction Temperature	$T_j$		150	$^\circ C$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ C$

Package Dimensions unit : mm (typ)  
7518-002



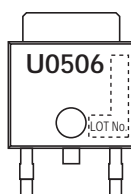
Package Dimensions unit : mm (typ)  
7003-001



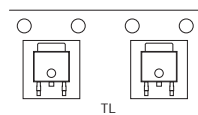
### Product & Package Information

- Package : TP
- JEITA, JEDEC : SC-64, TO-251
- Minimum Packing Quantity : 500 pcs./bag
- Package : TP-FA
- JEITA, JEDEC : SC-63, TO-252
- Minimum Packing Quantity : 700 pcs./reel

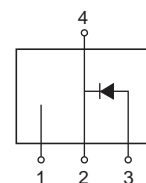
### Marking (TP, TP-FA)



### Packing Type (TP-FA) : TL



### Electrical Connection



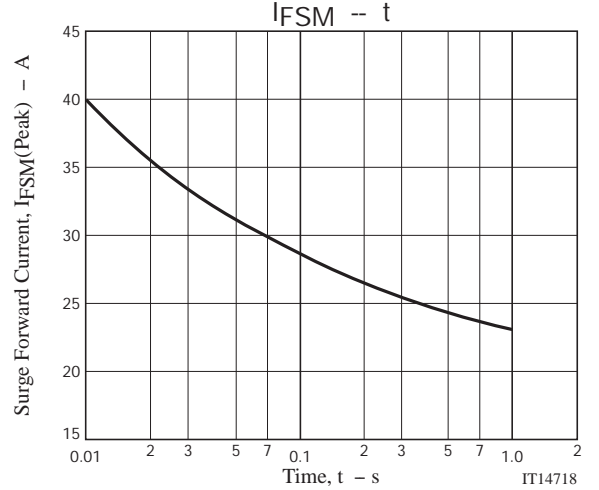
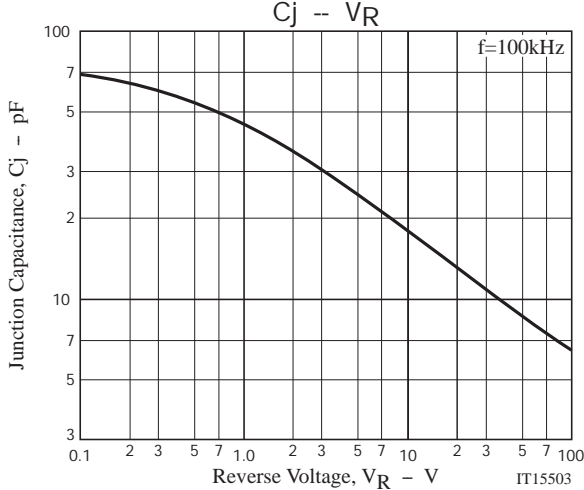
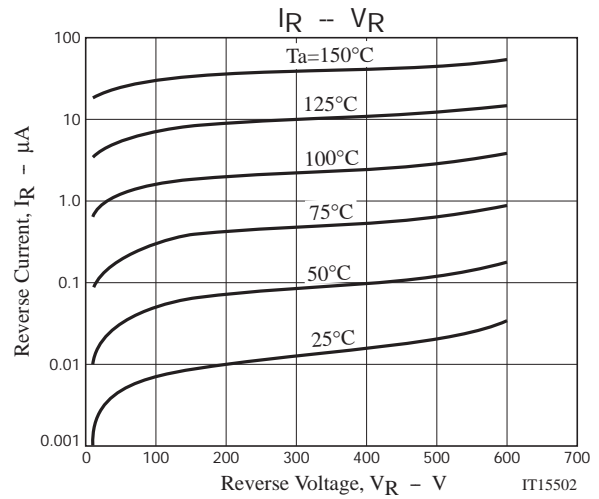
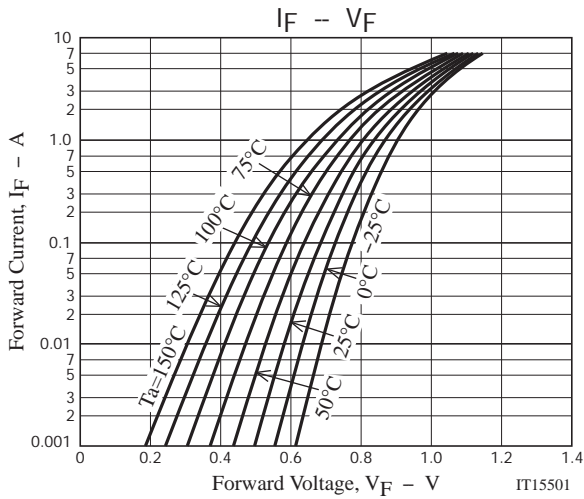
# UD0506T

## Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=1mA$	600			V
Forward Voltage	$V_F$	$I_F=5A$		1.1	1.3	V
Reverse Current	$I_R$	$V_R=600V$			10	$\mu A$
Reverse Recovery Time	$t_{rr1}$	$I_F=5A, di/dt=100A/\mu s$		120	150	ns
	$t_{rr2}$	$I_F=0.5A, I_R=1A$		53		ns
Thermal Resistance	$R_{th(j-c)}$	Junction -Case		6		$^{\circ}C/W$

## Ordering Information

Device	Package	Shipping	memo
UD0506T-H	TP	500pcs./bag	Pb Free and halogen Free
UD0506T-TL-H	TP-FA	700pcs./reel	



Taping Specification

UD0506T-TL-H

Packing Format

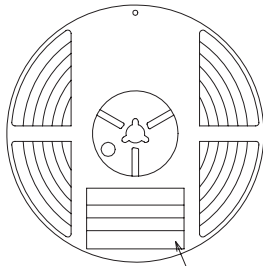
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
TP-FA	TP	700	2,100	12,600	3 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Reel label, Inner box label  
(unit:mm)

Outer box label

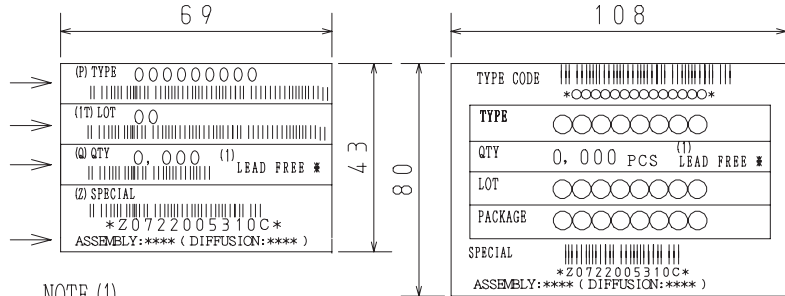
It is a label at the time of factory shipments.  
The form of a label may change in physical distribution process.

Packing method



Type No.  
LOT No.  
Quantity  
Origin

Reel label



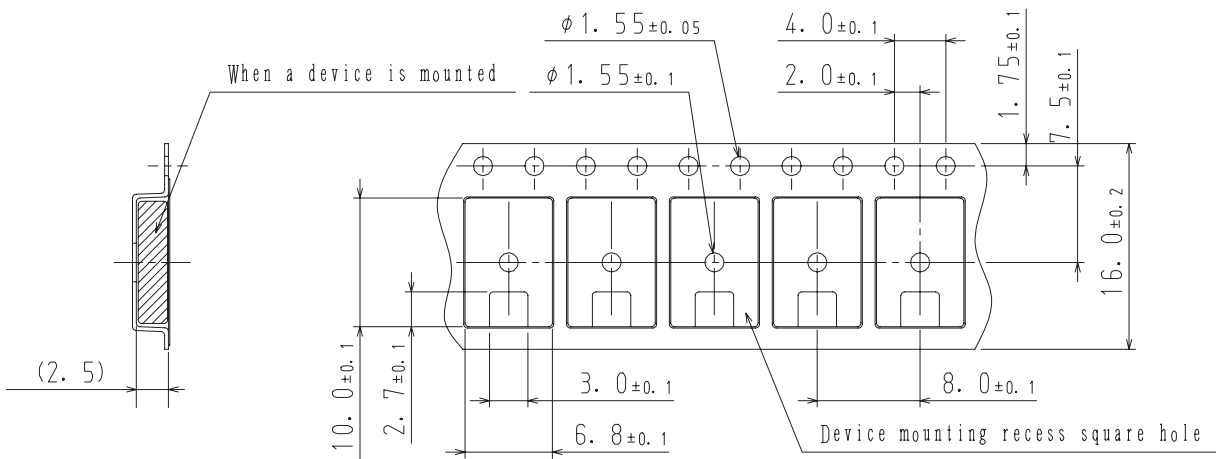
NOTE (1)

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

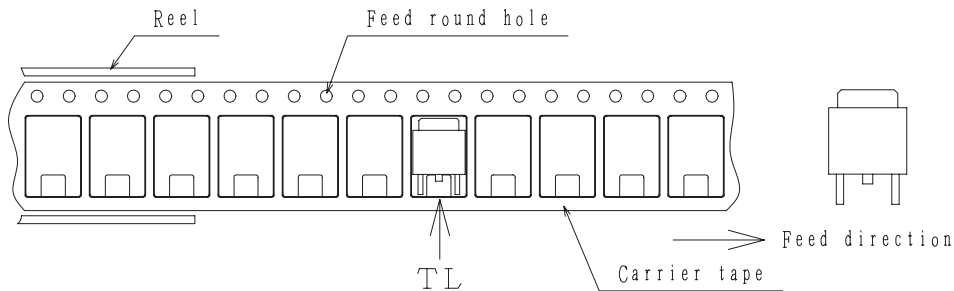
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



2. Device placement direction

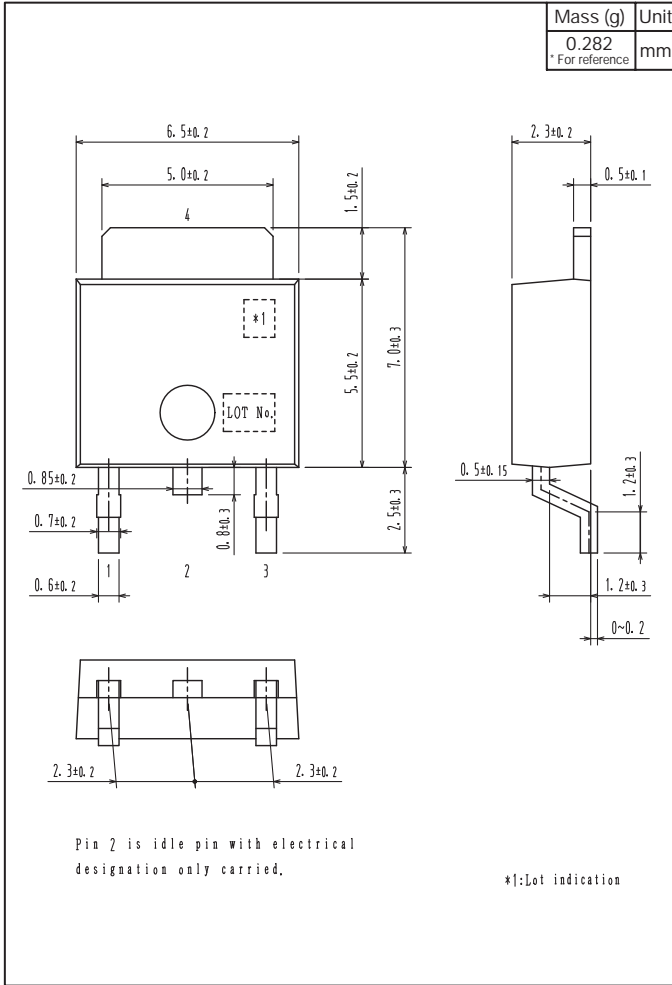


Those with one electrode terminal on the feed hole side.....TL

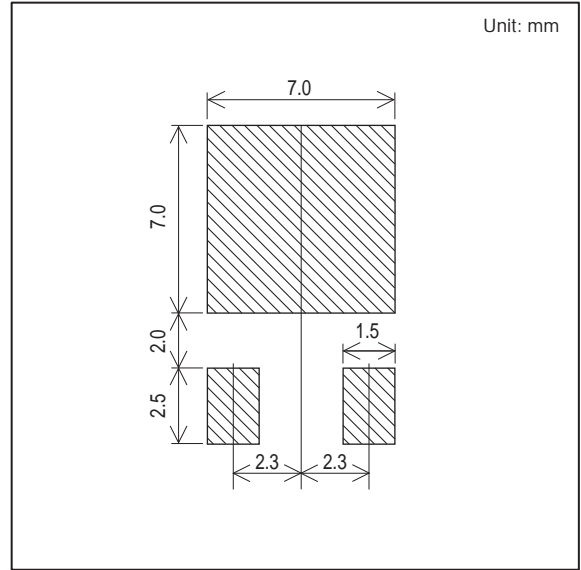
# UD0506T

## Outline Drawing

UD0506T-TL-H



## Land Pattern Example



# UD0506T

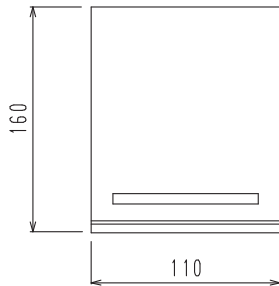
## Bag Packing Specification

UD0506T-H

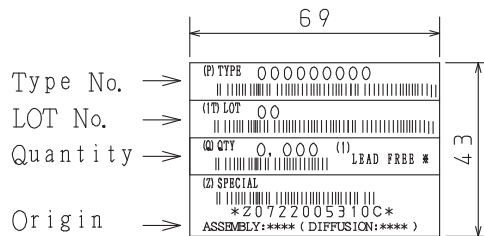
### 1. Packing Format

Package Name	Maximum Number of devices contained (pcs)			
	Bag	Inner box	Outer box	
TP	500	B-1	A-1	A-2
		10,000	50,000	30,000
	Packing format (Dimensions:mm (external))			
		Inner box	Outer box	
		B-1	A-1	A-2
		445×225×55	470×250×300	470×250×190

### 2. Bag dimensions (unit:mm)



### 3. Bag label, Inner box label (unit:mm)



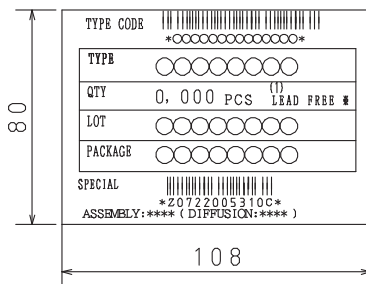
### 4. Outer box label (unit:mm)

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.

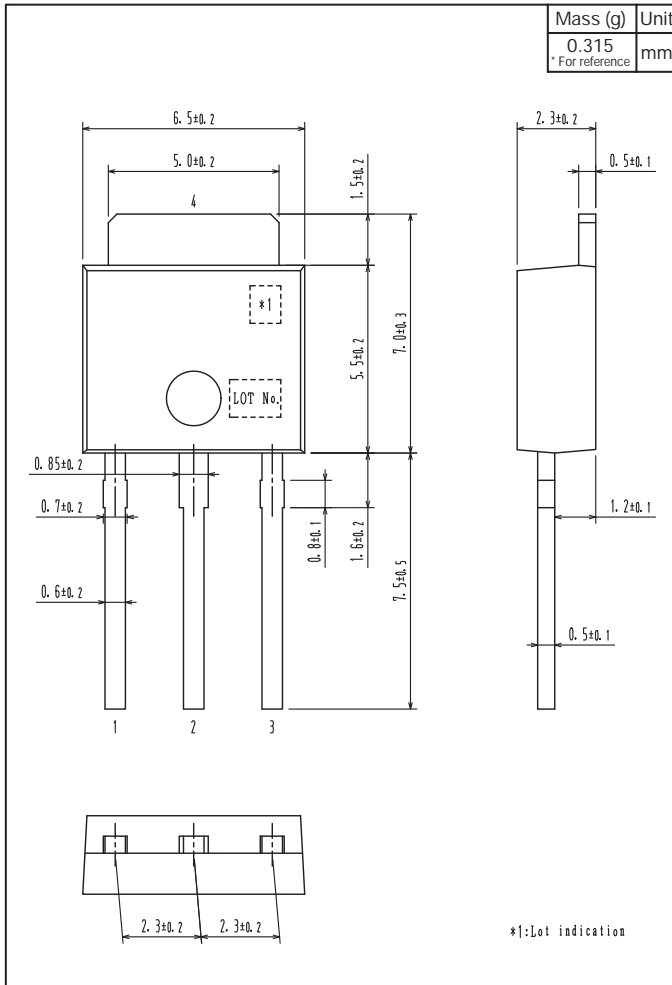
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3



# UD0506T

## Outline Drawing

UD0506T-H



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