



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 max=1.3V)

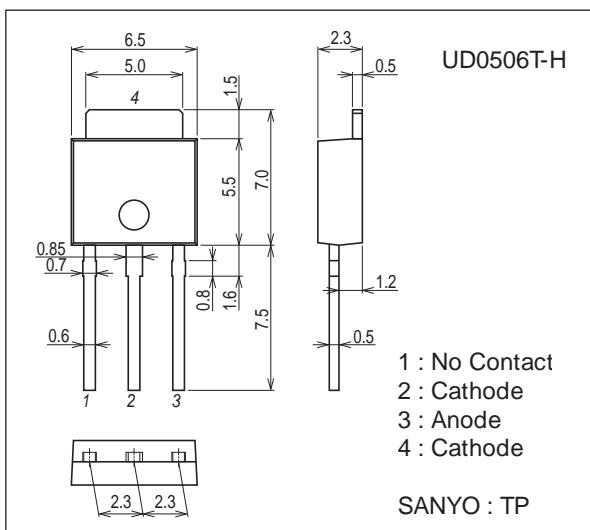
Specifications

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

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	°C
Storage Temperature	T _{stg}		-55 to +150	°C

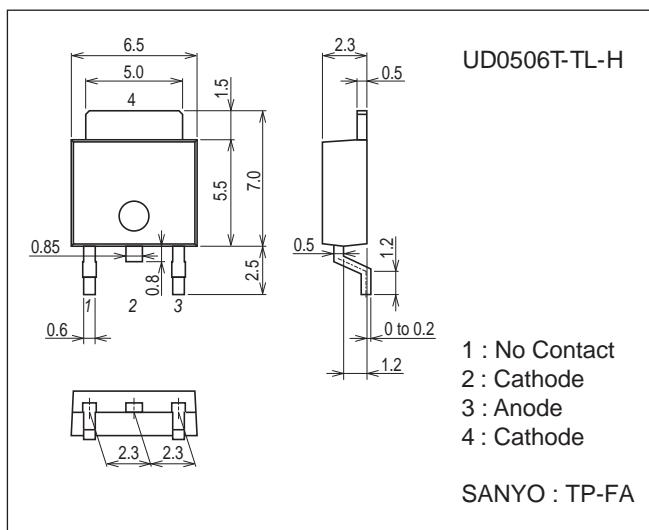
Package Dimensions unit : mm (typ)

7518-002



Package Dimensions unit : mm (typ)

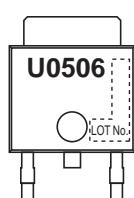
7003-001



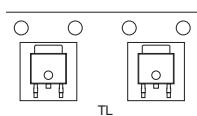
Product & Package Information

- 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

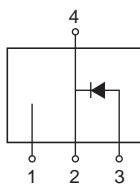
Marking (TP, TP-FA)



Packing Type (TP-FA) : TL



Electrical Connection



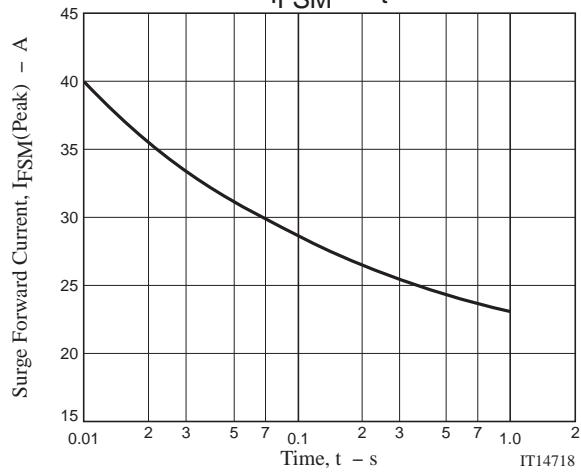
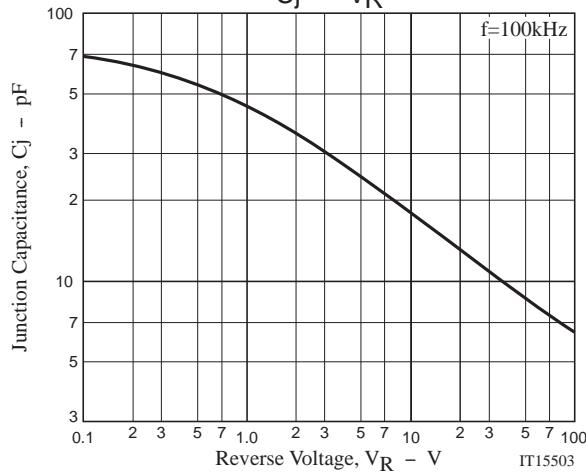
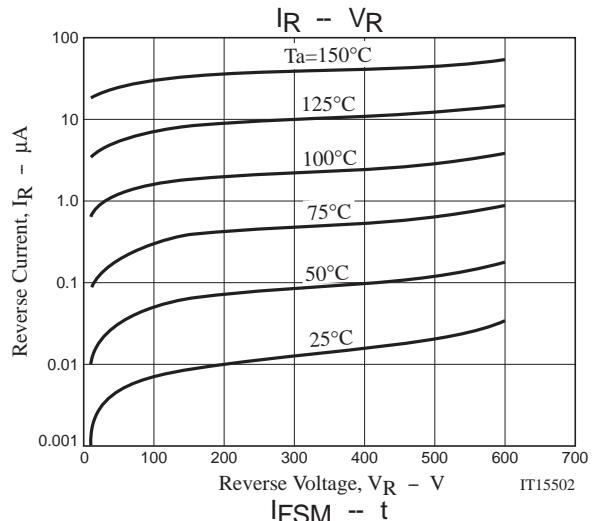
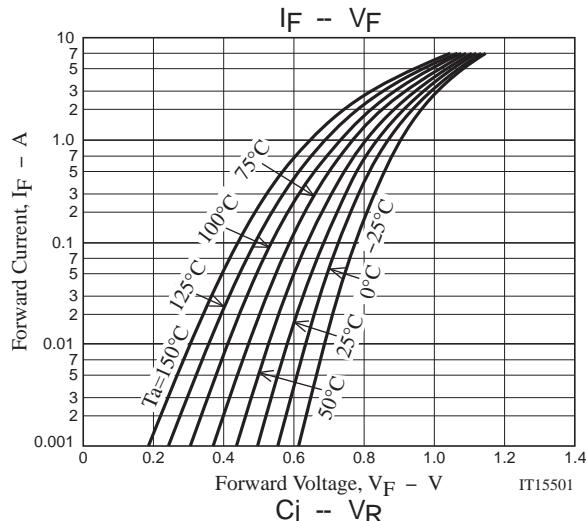
SANYO Semiconductor Co., Ltd.
<http://www.sanyosemi.com/en/network/>

Electrical Characteristics at $T_a=25^\circ\text{C}$

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

Ordering Information

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



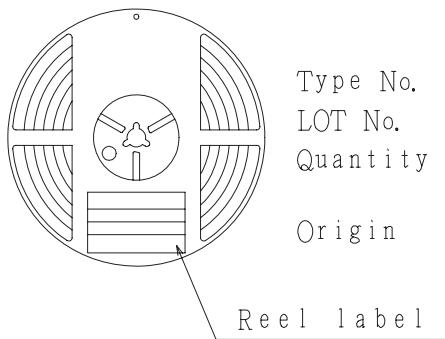
Taping Specification

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

Packing method



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.

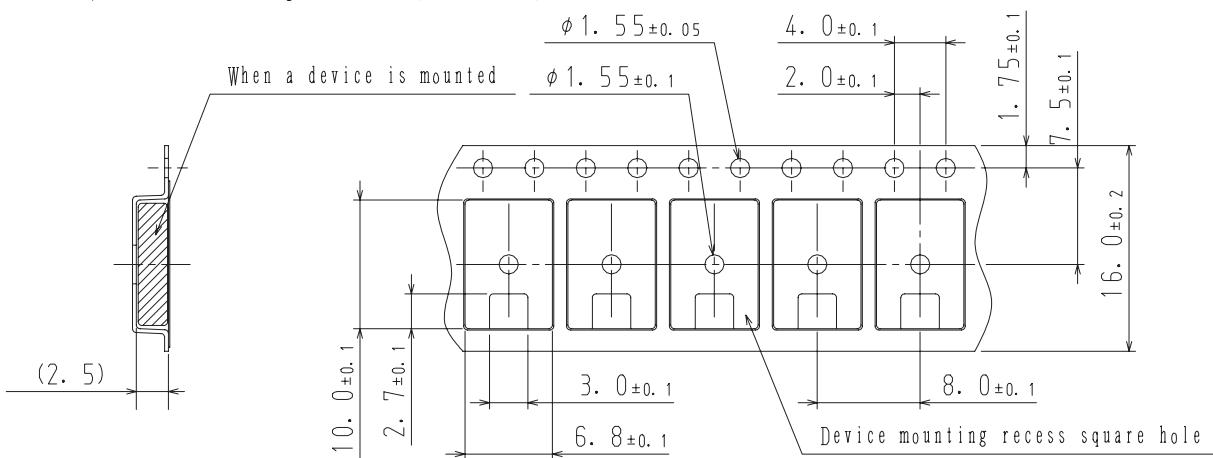
	6 9		1 0 8
(P) TYPE 0000000000 		TYPE CODE  TYPE 	
(F1) LOT 00 		QTY 0,000 PCS (1) LEAD FREE * 	
(Q1) QTY 0,000 (1) LEAD FREE * 		LOT 	
(Z) SPECIAL 		PACKAGE 	
		4 3	8 0

ASSEMBLY:**** (DIFFUSION)
NOTE (1) The LEAD FREE * description shows that the surface treatment of the terminal is lead free

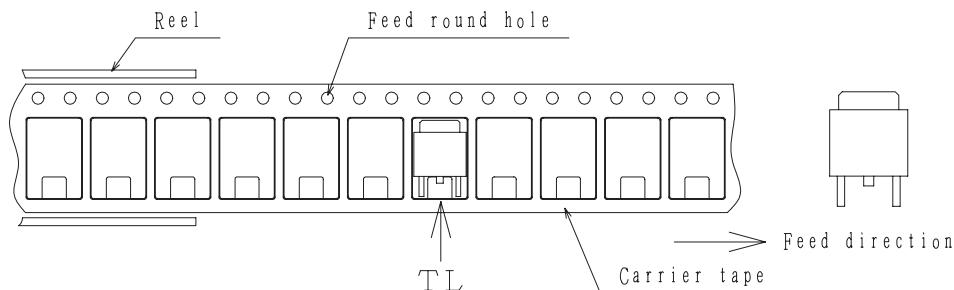
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



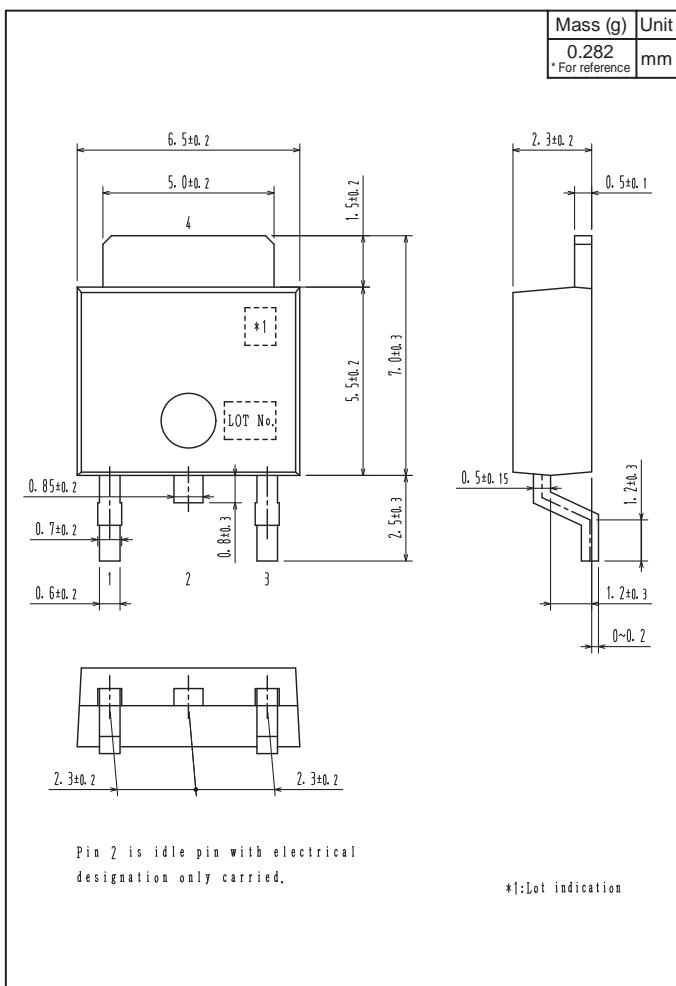
2. Device placement direction



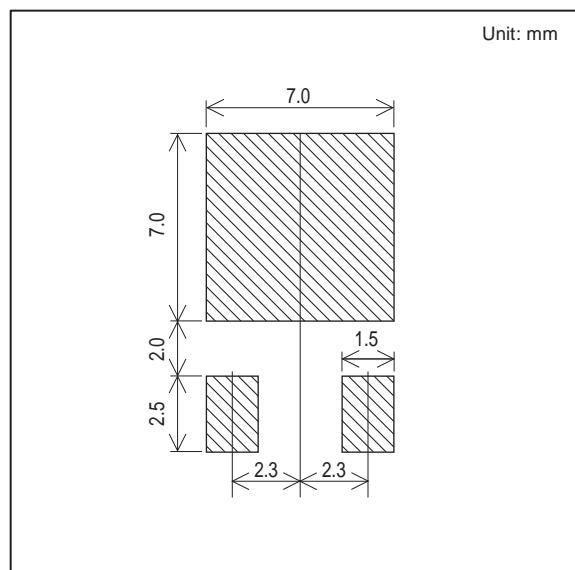
Those with one electrode terminal on the feed hole side.....TL

Outline Drawing

UD0506T-TL-H



Land Pattern Example



Pin 2 is idle pin with electrical designation only carried.

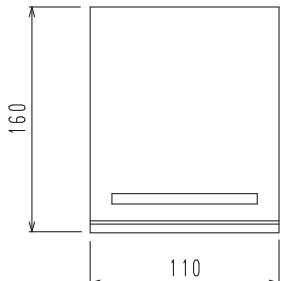
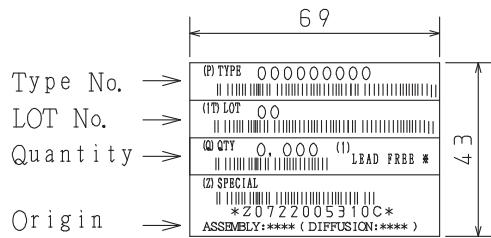
*1:Lot indication

Bag Packing Specification

UD0506T-H

1. Packing Format

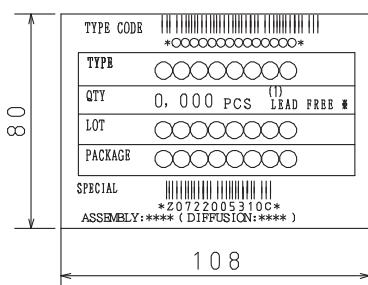
Package Name	Maximum Number of devices contained (pcs)		
	Bag	Inner box	Outer box
TP 500	B-1	A-1	A-2
	10,000	50,000	30,000
Packing format (Dimensions:mm (external))			
Inner box	Outer box		
	B-1	A-1	A-2
	445×225×55	470×250×300	470×250×190

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.

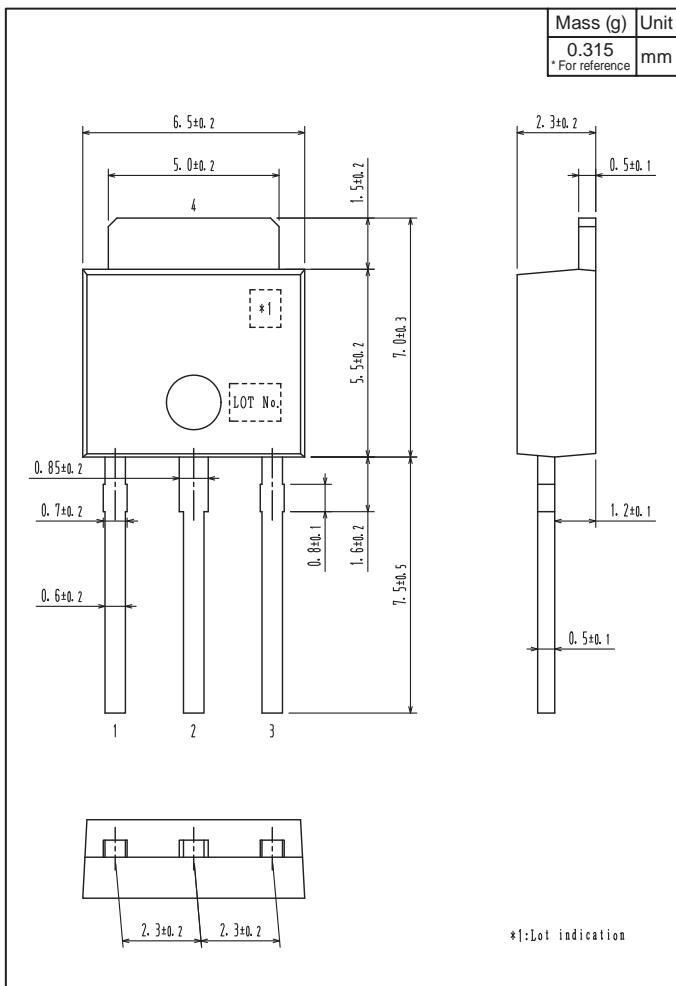
NOTE (1)
 The LEAD FREE * description shows that the surface treatment of the terminal is lead free.

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



Outline Drawing

UD0506T-H



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