



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

RD0506T — Diffused Junction Silicon Diode Low VF · High-Speed Switching Diode

Features

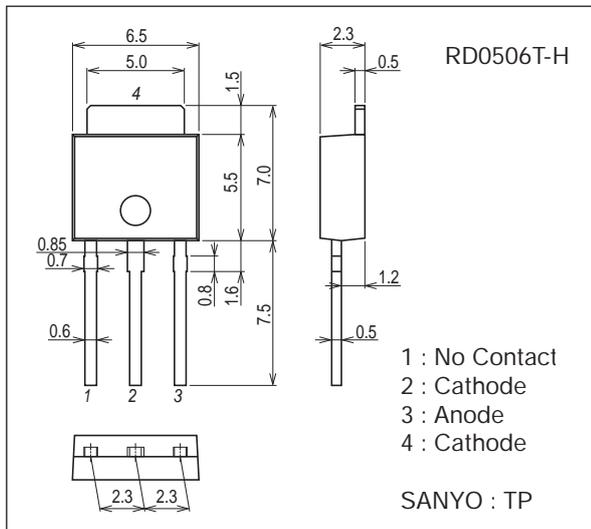
- High breakdown voltage ($V_{RRM}=600V$)
- Low noise at the time of reverse recovery
- Halogen free compliance
- Fast reverse recovery time
- Low forward voltage ($V_F \text{ max}=1.6V$)

Specifications

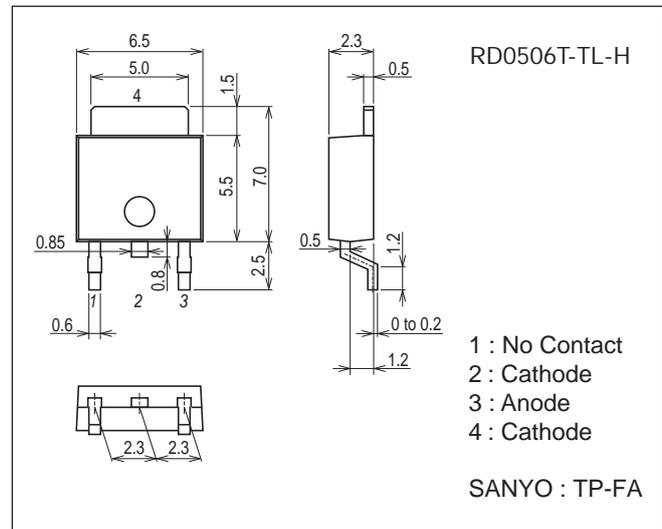
Absolute Maximum Ratings at $T_a=25^\circ C$

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, 1 cycle	80	A
Junction Temperature	T_j		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

Package Dimensions unit : mm (typ)
7518-002



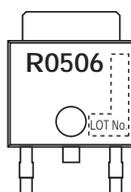
Package Dimensions unit : mm (typ)
7003-001



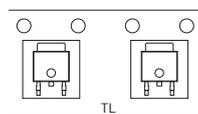
Product & Package Information

- 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

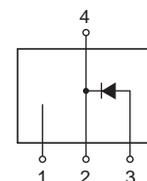
Marking (TP, TP-FA)



Packing Type (TP-FA) : TL



Electrical Connection



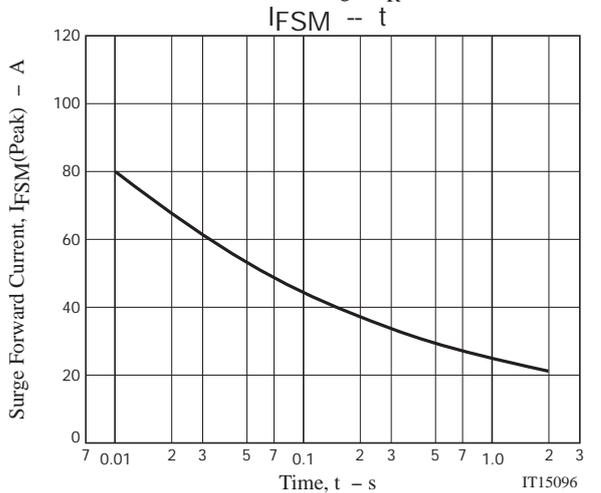
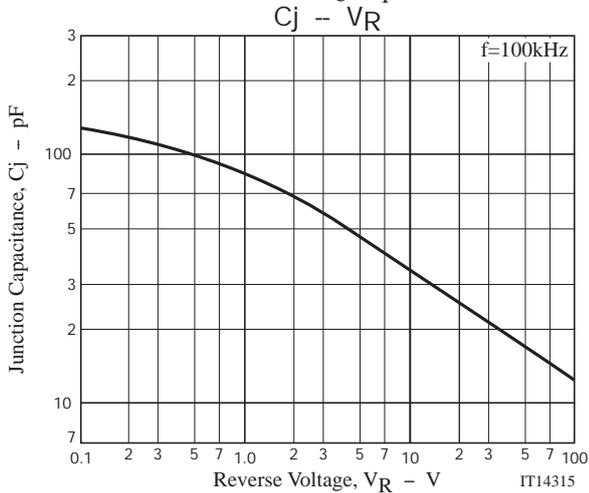
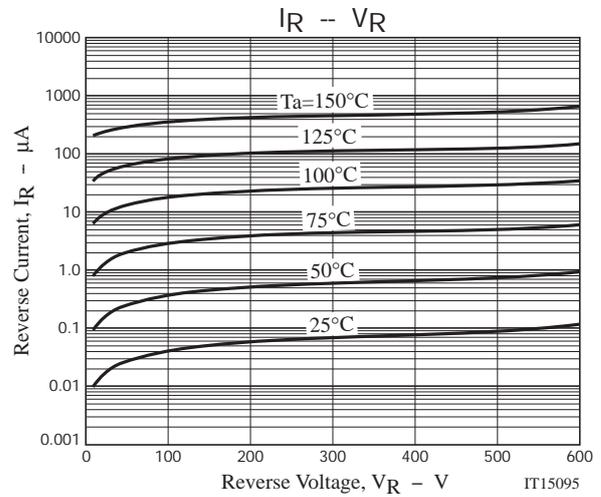
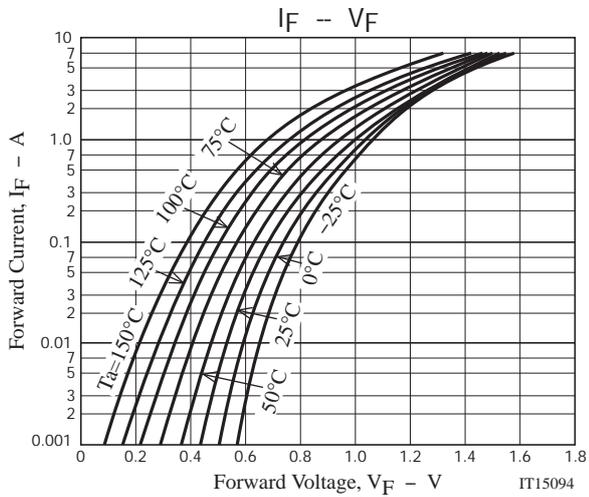
RD0506T

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	$I_F=5A$		1.3	1.6	V
Reverse Current	I_R	$V_R=600V$			50	μA
Reverse Recovery Time	t_{rr1}	$I_F=5A, di/dt=100A/\mu s$		40	50	ns
	t_{rr2}	$I_F=0.5A, I_R=1A$		16		ns
Thermal Resistance	$R_{th(j-c)}$	Junction -Case		6		$^{\circ}C/W$

Ordering Information

Device	Package	Shipping	memo
RD0506T-H	TP	500pcs./bag	Pb Free and halogen Free
RD0506T-TL-H	TP-FA	700pcs./reel	



Taping Specification

RD0506T-TL-H

Packing Format

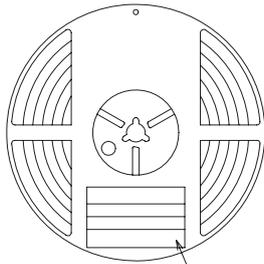
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
TP-FA	TP	700	2,100	12,600	3 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Reel label, Inner box label
(unit:mm)

Outer box label

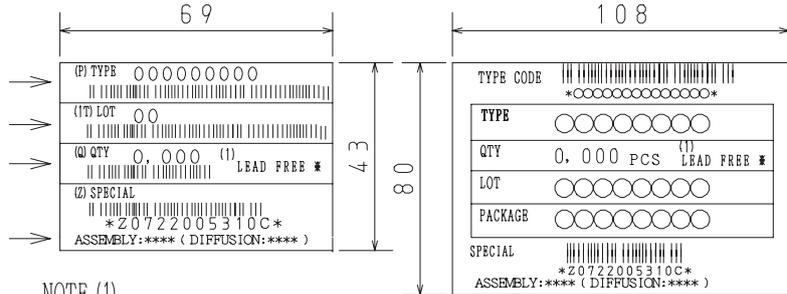
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.

Packing method



Type No.
LOT No.
Quantity
Origin

Reel label



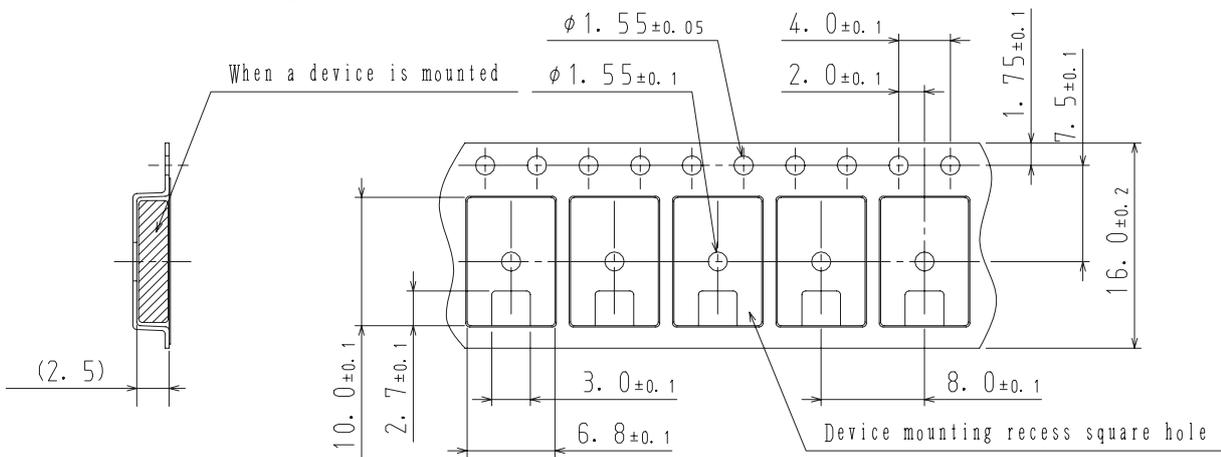
NOTE (1)

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

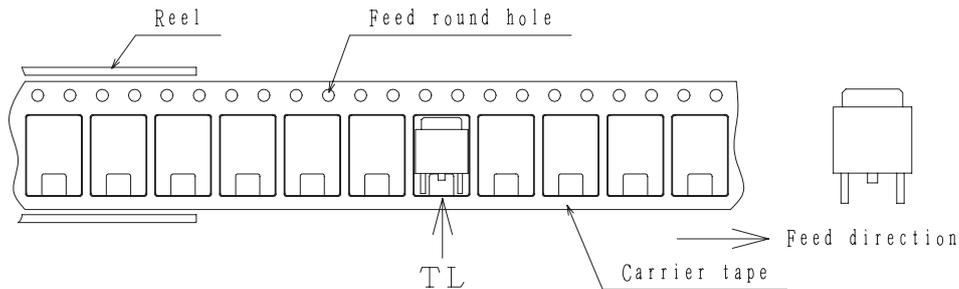
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



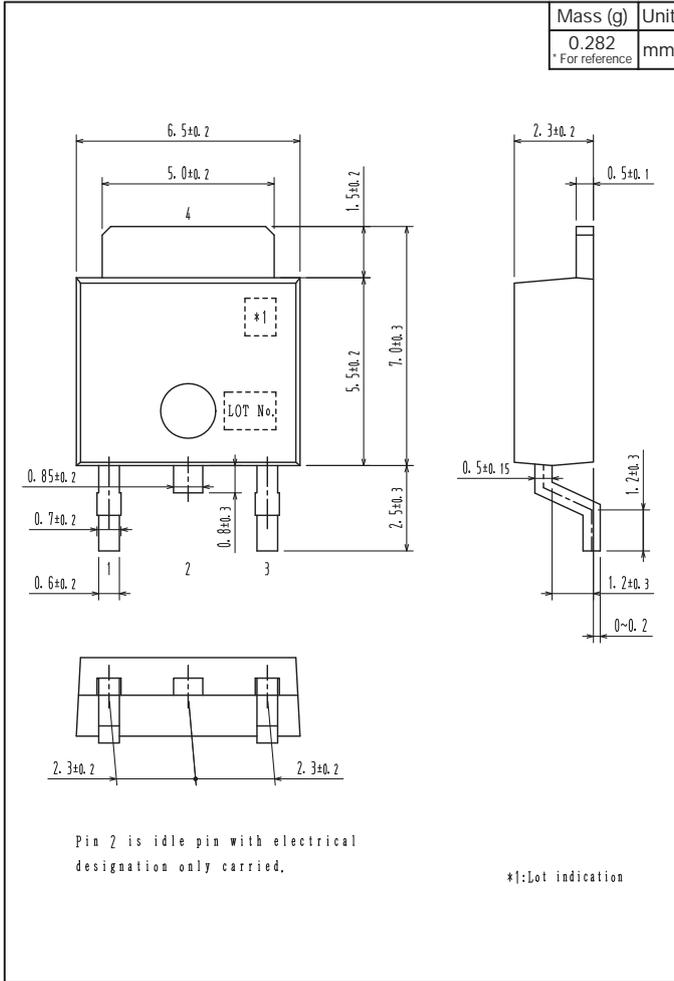
2. Device placement direction



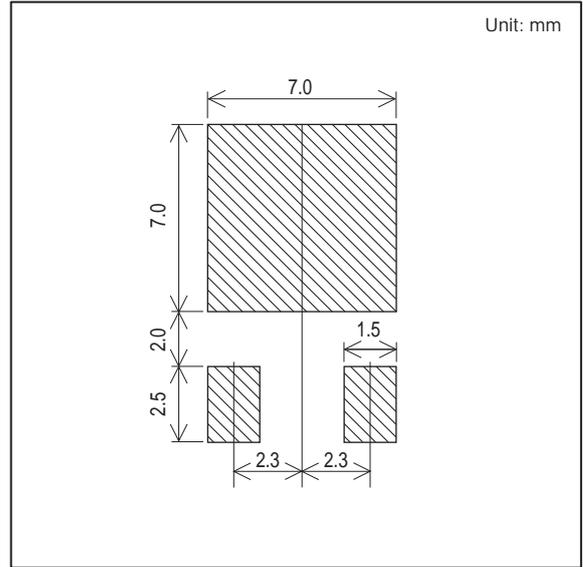
Those with one electrode terminal on the feed hole side.....TL

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Outline Drawing RD0506T-TL-H



Land Pattern Example



RD0506T

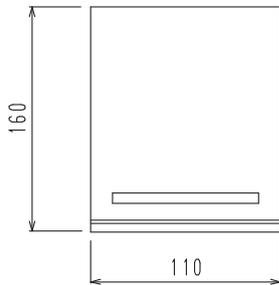
Bag Packing Specification

RD0506T-H

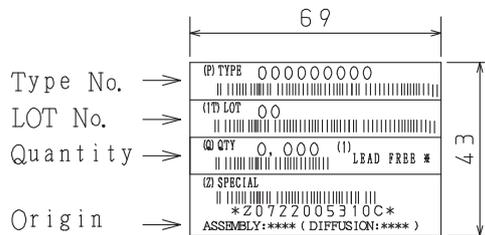
1. Packing Format

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)



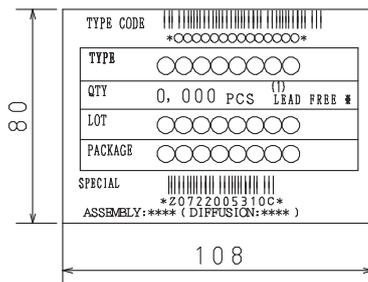
4. Outer box label (unit:mm)

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.

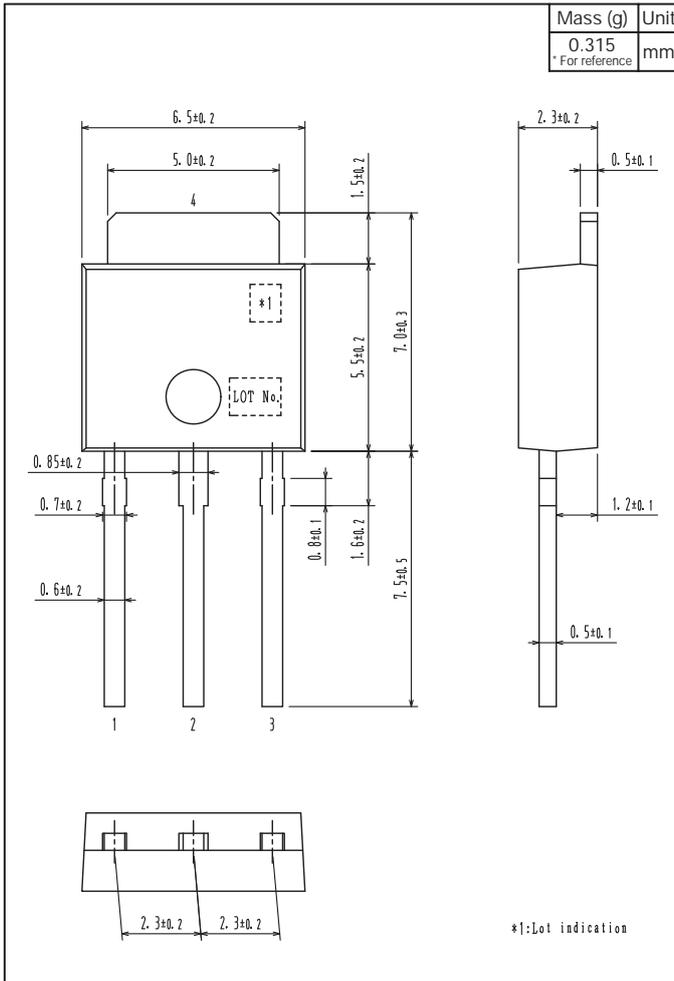
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3



RD0506T

Outline Drawing

RD0506T-H



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