



RD0306T

Planar Ultrafast Rectifier Fast trr type, 3A, 600V, 50ns, TP/TP-FA

ON Semiconductor®

<http://onsemi.com>

Features

- High breakdown voltage (VRRM=600V)
- Low noise at the time of reverse recovery
- Halogen free compliance
- Fast reverse recovery time
- Low forward voltage (VF max=1.5V)

Specifications

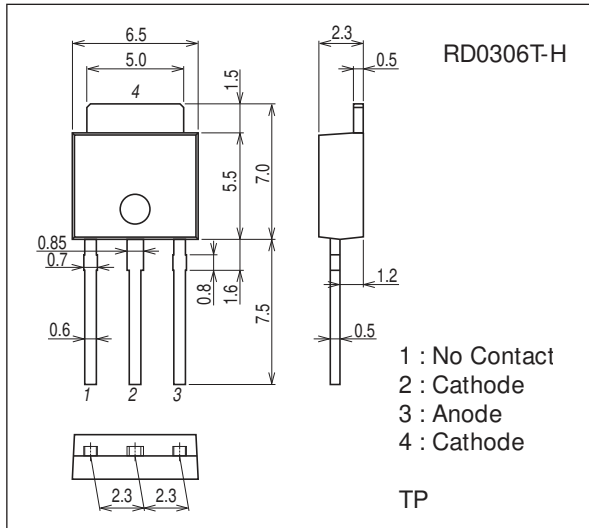
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	VRRM		600	V
Average Output Current	IO		3	A
Surge Forward Current	IFSM	Sine wave 10ms, 1 cycle	40	A
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

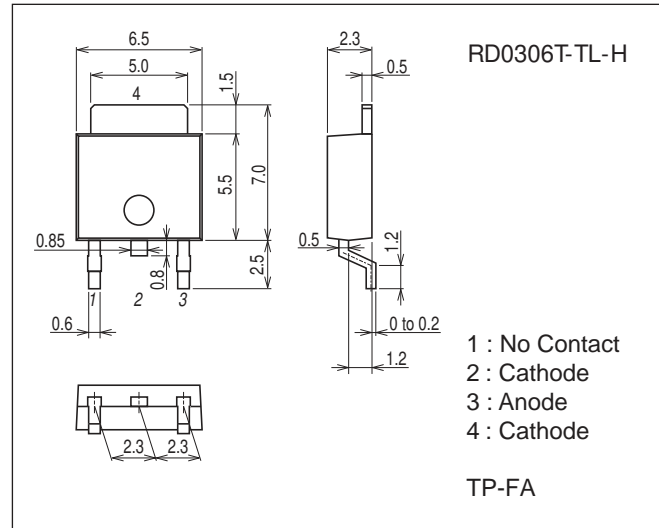
Package Dimensions unit : mm (typ)

7518-002



Package Dimensions unit : mm (typ)

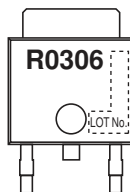
7003-001



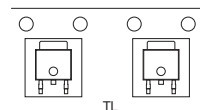
Product & Package Information

- Package : TP
- JEITA, JEDEC : SC-64, TO-251, SOT-553, DPAK
- Minimum Packing Quantity : 500 pcs./bag
- Package : TP-FA
- JEITA, JEDEC : SC-63, TO-252, SOT-428, DPAK
- Minimum Packing Quantity : 700 pcs./reel

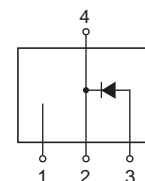
Marking (TP, TP-FA)



Packing Type (TP-FA) : TL



Electrical Connection



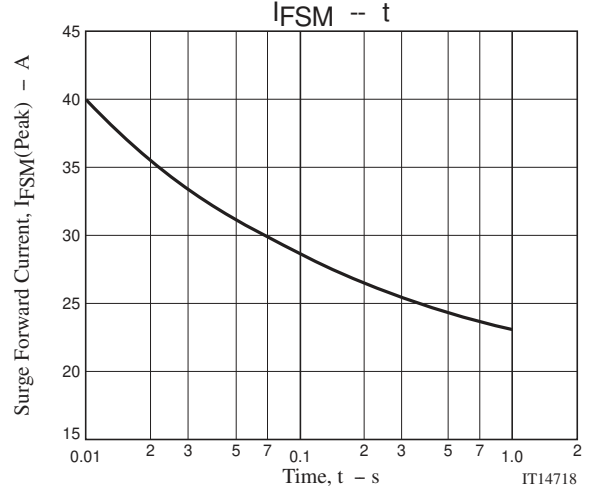
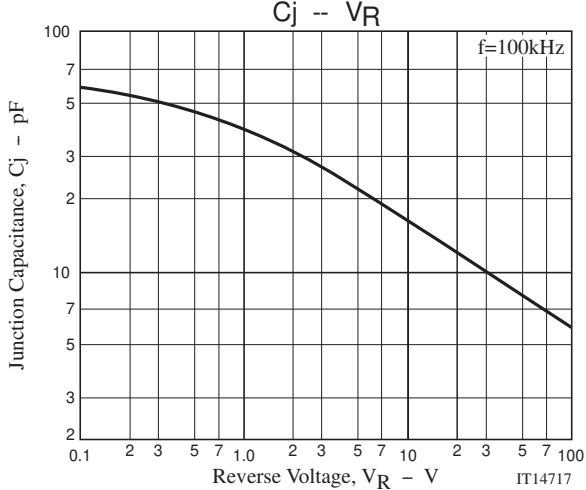
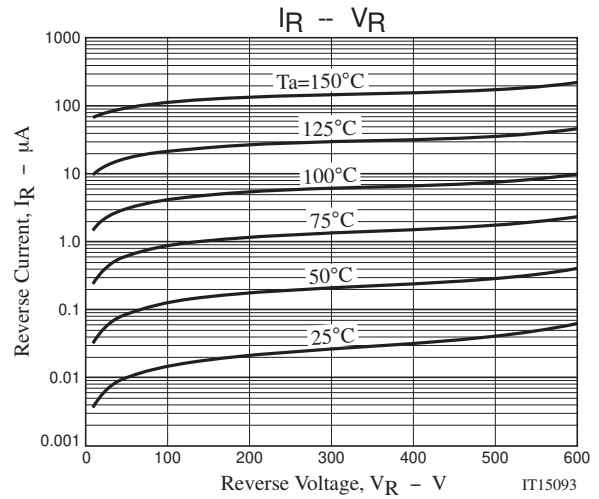
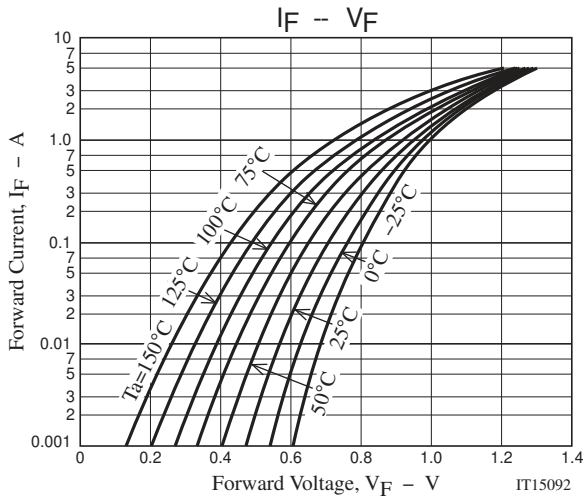
RD0306T

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	$I_R=1\text{mA}$	600			V
Forward Voltage	V_F	$I_F=3\text{A}$		1.2	1.5	V
Reverse Current	I_R	$V_R=600\text{V}$			10	μA
Reverse Recovery Time	t_{rr1}	$I_F=3\text{A}, di/dt=100\text{A}/\mu\text{s}$		40	50	ns
	t_{rr2}	$I_F=0.5\text{A}, I_R=1\text{A}$		16		ns
Thermal Resistance	$R_{th(j-c)}$	Junction - Case		6		$^{\circ}\text{C}/\text{W}$

Ordering Information

Device	Package	Shipping	memo
RD0306T-H	TP	500pcs./bag	Pb Free and halogen Free
RD0306T-TL-H	TP-FA	700pcs./reel	



Taping Specification

RD0306T-TL-H

Packing Format

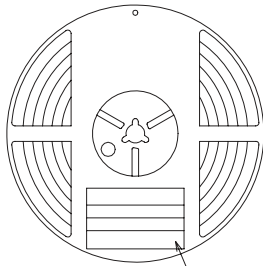
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
TP-FA	TP	700	2,100	12,600	3 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Reel label, Inner box label
(unit:mm)

Outer box label

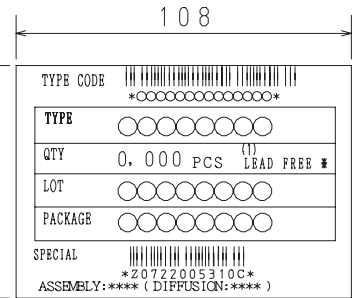
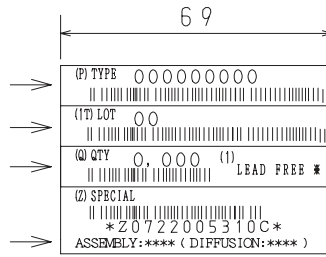
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.

Packing method



Reel label

Type No.
LOT No.
Quantity
Origin



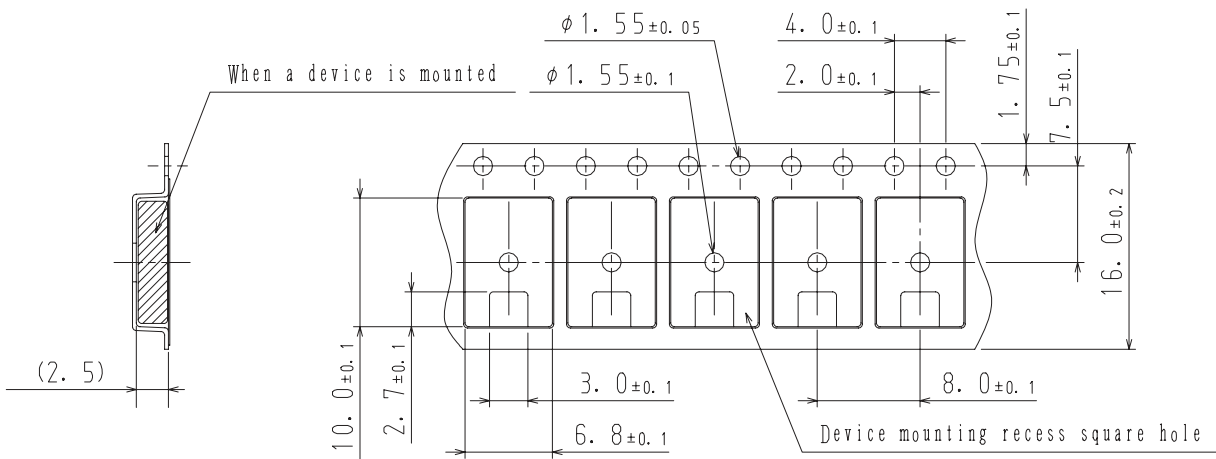
NOTE (1)

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

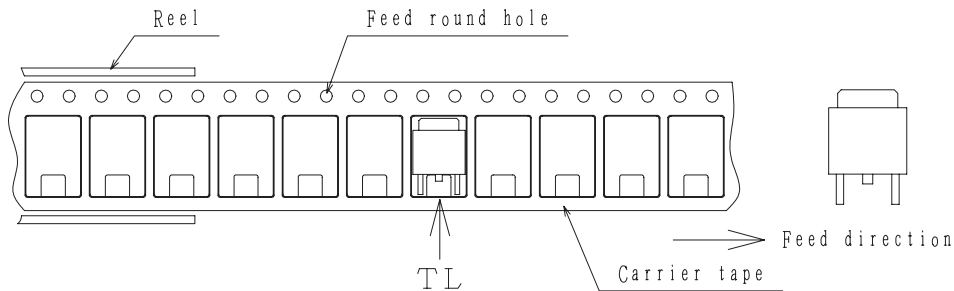
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



2. Device placement direction

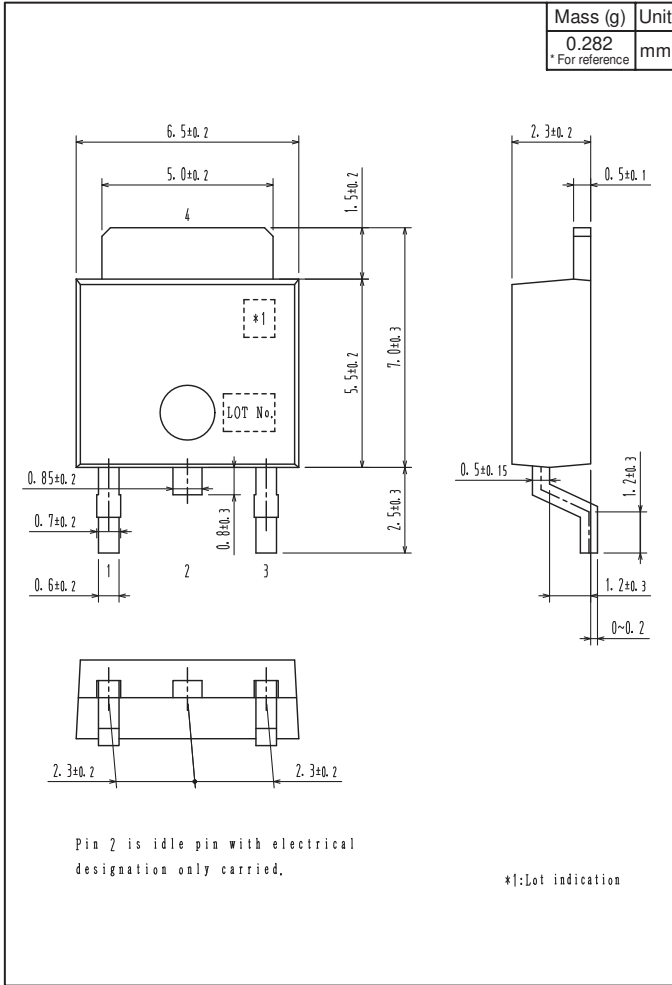


Those with one electrode terminal on the feed hole side.....TL

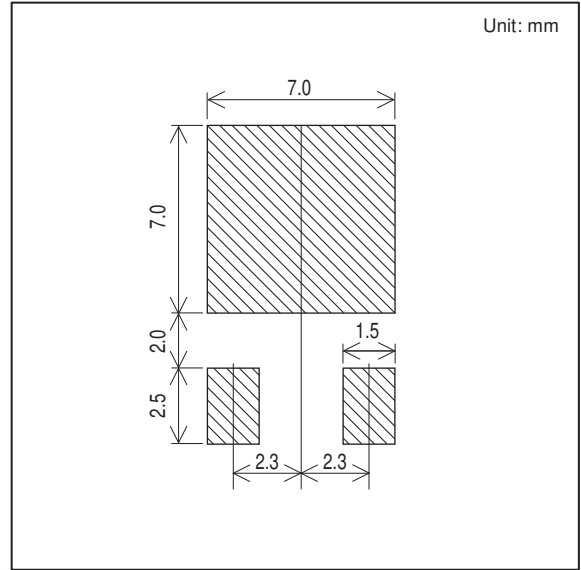
RD0306T

Outline Drawing

RD0306T-TL-H



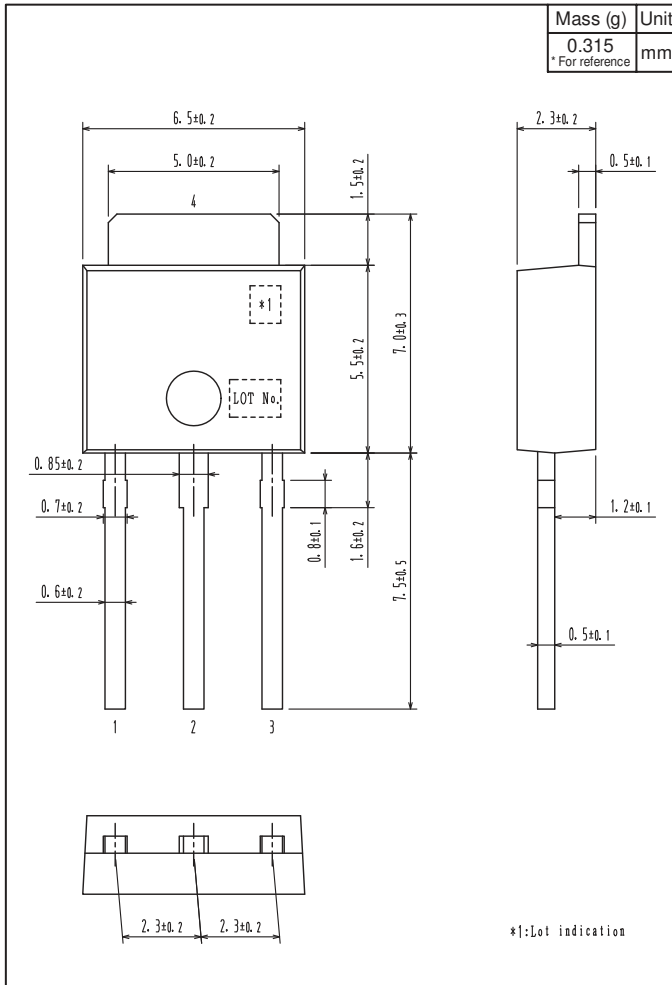
Land Pattern Example



RD0306T

Outline Drawing

RD0306T-H



ON Semiconductor and the ON logo are registered trademarks of Semiconductor Components Industries, LLC (SCILLC). SCILLC owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of SCILLC's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent regarding the design or manufacture of the part. SCILLC is an Equal Opportunity/Affirmative Action Employer. This literature is subject to all applicable copyright laws and is not for resale in any manner.