Ordering number : ENA1704A

# RD0106T

## Planar Ultrafast Rectifier
### Fast trr type, 1A, 600V, 50ns, TP/TP-FA

ON Semiconductor®
http://onsemi.com

## Features

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

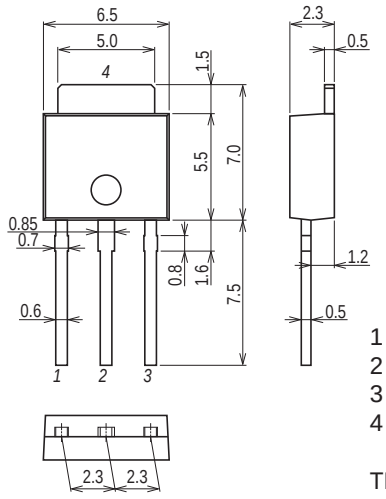
## Specifications

### Absolute Maximum Ratings at Ta=25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | | 600 | V |
| Average Output Current | $I_O$ | | 1 | A |
| Surge Forward Current | $I_{FSM}$ | Sine wave 10ms | 10 | 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

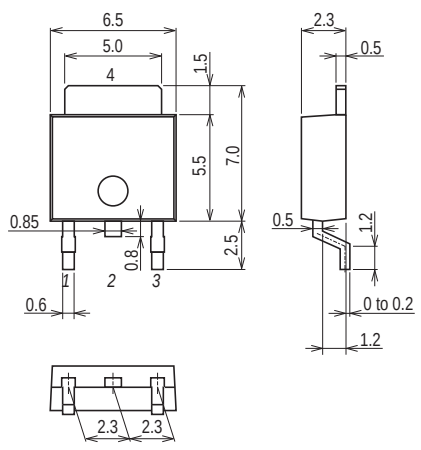



RD0106T-H

1 : No Contact
2 : Cathode
3 : Anode
4 : Cathode

TP

**Package Dimensions** unit : mm (typ)
7003-001




RD0106T-TL-H

1 : No Contact
2 : Cathode
3 : Anode
4 : Cathode

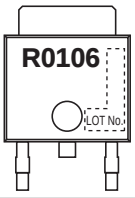
TP-FA

### Product & Package Information

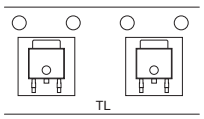
- Package : TP
- JEITA, JEDEC : SC-64, TO-251
- Minimum Packing Quantity : 500 pcs./bag

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

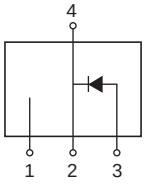
**Marking (TP, TP-FA)**




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




**Electrical Connection**

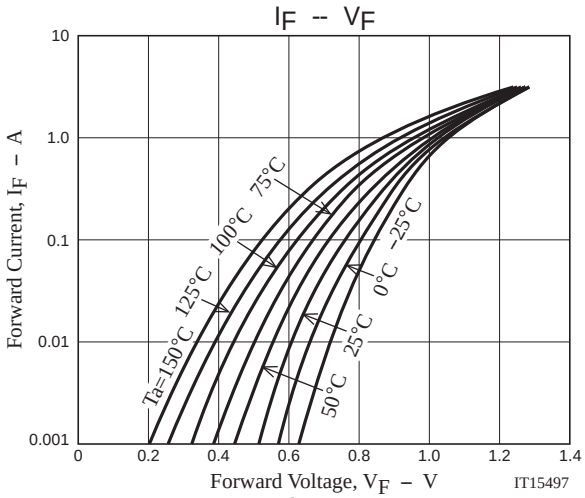


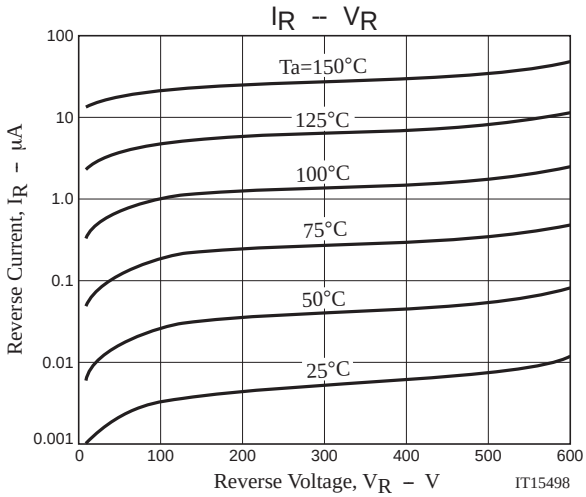
## Electrical Characteristics at Ta=25°C

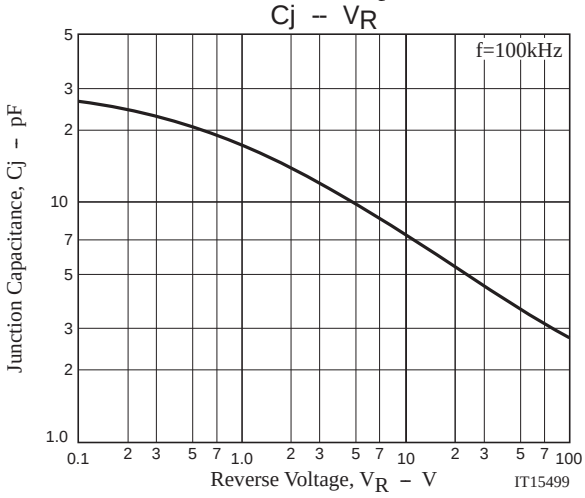
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | min | typ | max | |
| Reverse Voltage | $V_R$ | $I_R$=1mA | 600 | | | V |
| Forward Voltage | $V_F$ | $I_F$=1A | | 1.1 | 1.3 | V |
| Reverse Current | $I_R$ | $V_R$=600V | | | 10 | μA |
| Reverse Recovery Time | $t_{rr}1$ | $I_F$=1A, di / dt=100A/μs | | 40 | 50 | ns |
| | $t_{rr}2$ | $I_F$=0.5A, $I_R$=1A | | 16 | | ns |
| Thermal Resistance | Rth(j-c) | Junction -Case | | 6 | | °C / W |

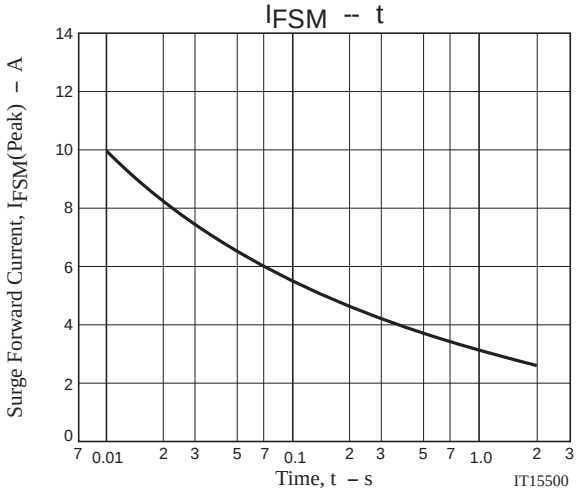
## Ordering Information

| Device | Package | Shipping | memo |
|---|---|---|---|
| RD0106T-H | TP | 500pcs./bag | Pb Free and halogen Free |
| RD0106T-TL-H | TP-FA | 700pcs./reel | |



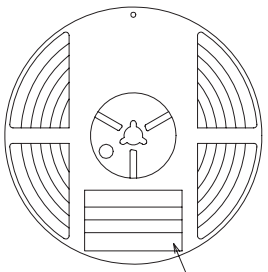
**Taping Specification**

RD0106T-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<br>Dimensions:mm (external)<br>183×72×185 | 6 inner boxes contained<br>Dimensions:mm (external)<br>440×195×210 |

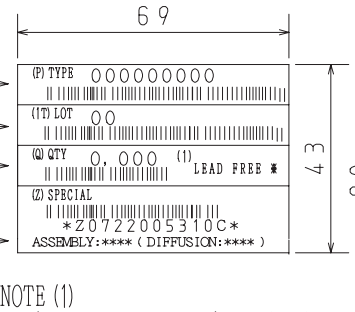
### Packing method



Reel label

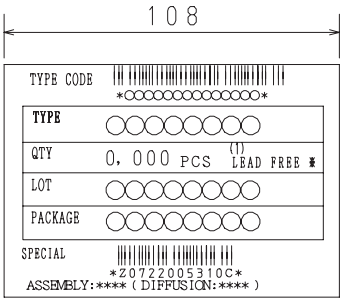
### Reel label, Inner box label

(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.

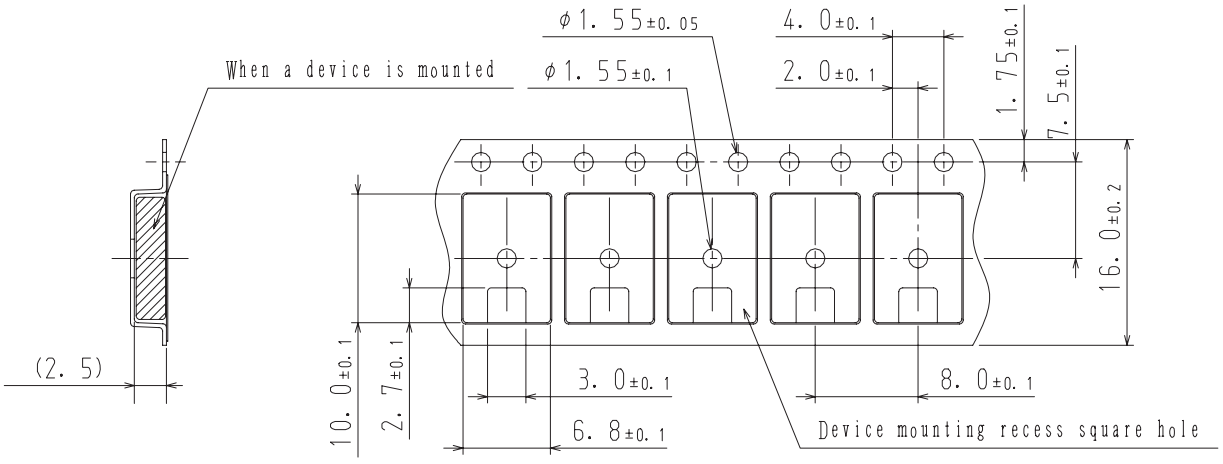



NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

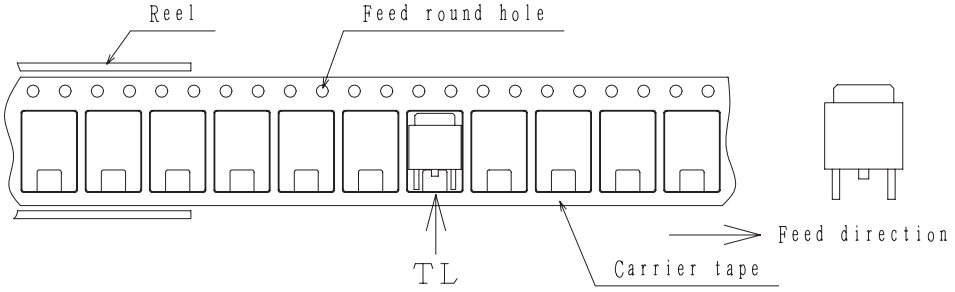
| Label | JEITA Phase |
|---|---|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3 |

## Taping configuration

1. Carrier tape size (unit:mm)



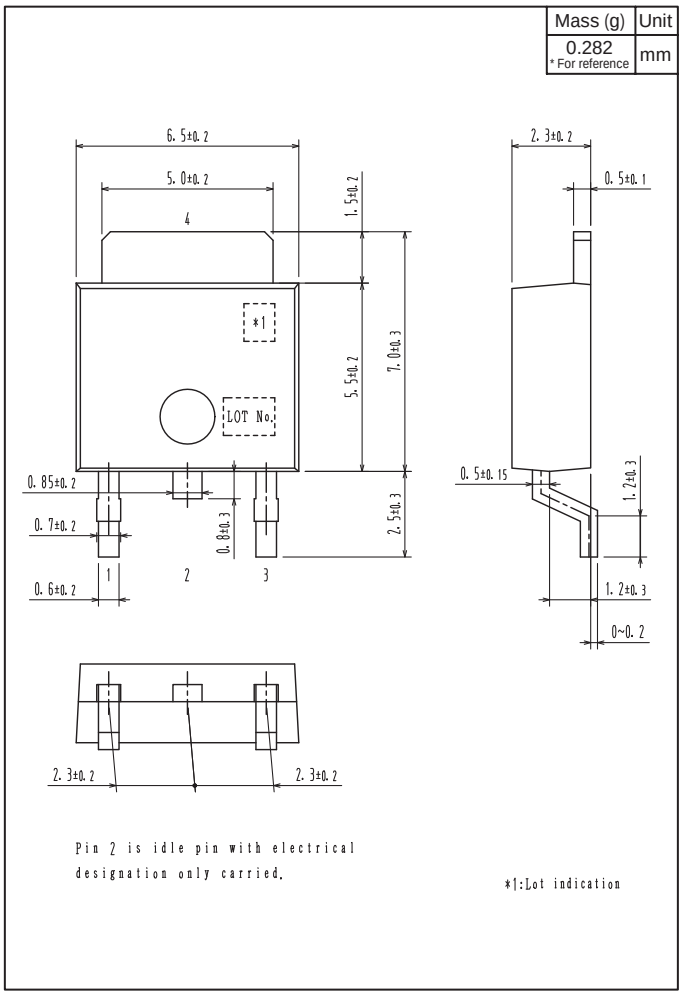

2. Device placement direction



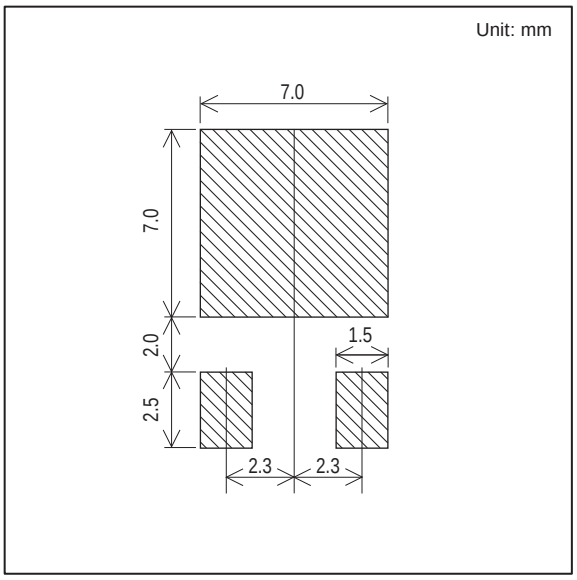

Those with one electrode terminal on the feed hole side·····TL

## Outline Drawing

RD0106T-TL-H




## Land Pattern Example



**Bag Packing Specification**

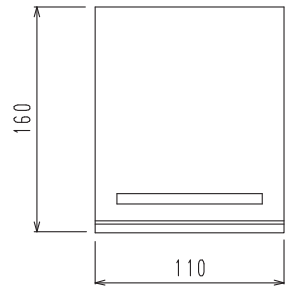
RD0106T-H

## 1. Packing Format

| Package Name | Maximum Number of devices contained (pcs) | | | |
|---|---|---|---|---|
| | Bag | Inner box | Outer box | |
| TP | | B-1 | A-1 | A-2 |
| | 500 | 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 |

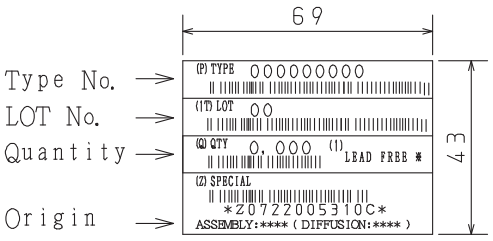
## 2. Bag dimensions

(unit: mm)




## 3. Bag label, Inner box label

(unit: mm)



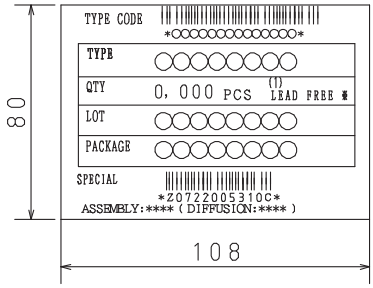

NOTE (1)
The LEAD FREE ※ description shows that the surface treatment of the terminal is lead free.

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

## 4. Outer box label

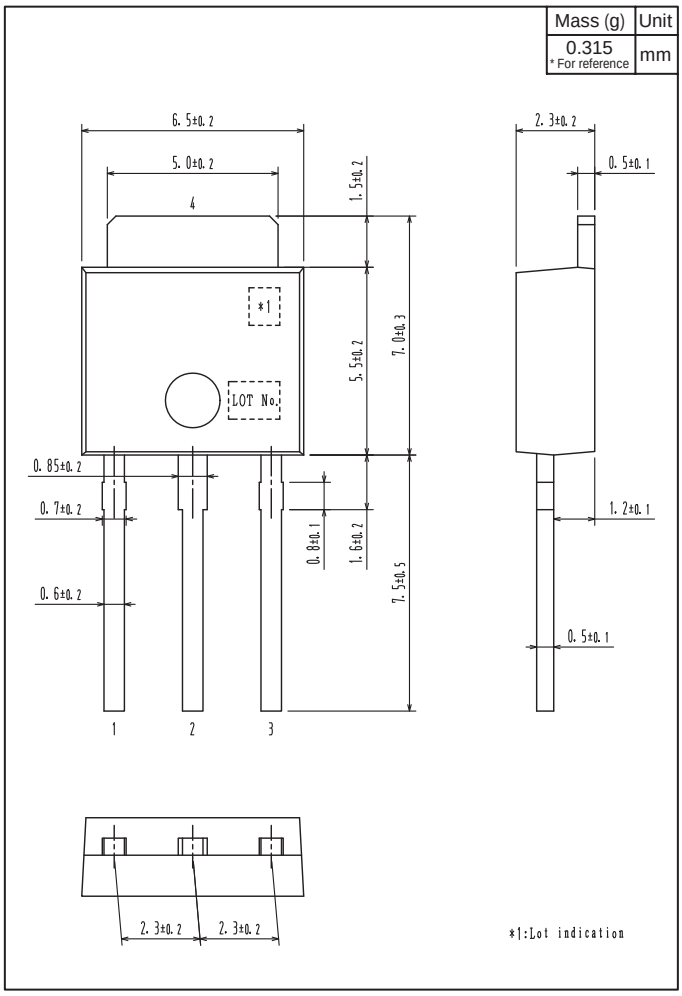
(unit: mm)

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



## Outline Drawing

RD0106T-H



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