



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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UD0506T

Planar Ultrafast Rectifier Low VF type, 5A, 600V, 1.3V, TP/TP-FA

ON Semiconductor®

<http://onsemi.com>

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

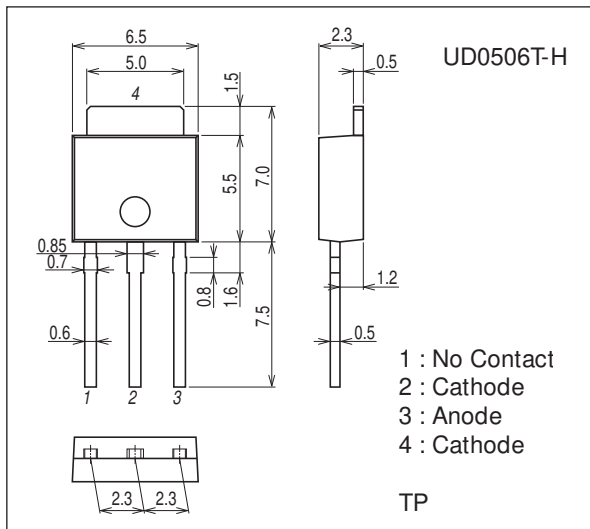
Absolute Maximum Ratings at $T_a=25^\circ C$

| 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 | $^\circ C$ |

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.

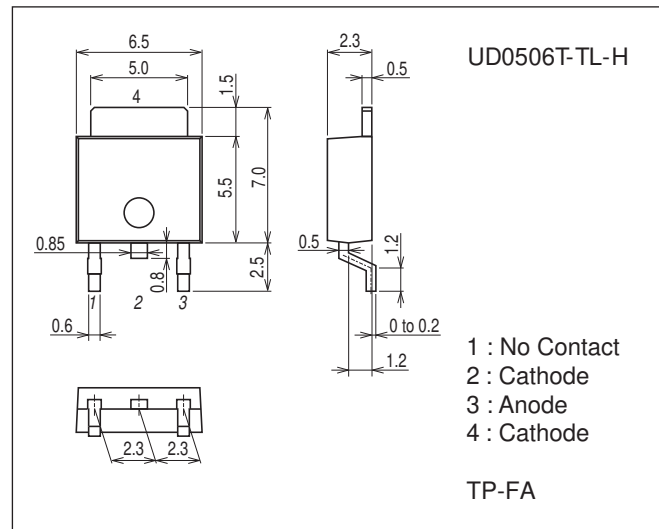
Package Dimensions

7518-002



Package Dimensions

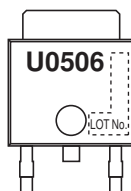
7003-001



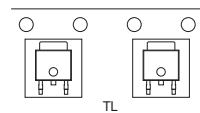
Product & Package Information

- 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

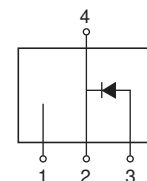
Marking (TP, TP-FA)



Packing Type (TP-FA) : TL



Electrical Connection



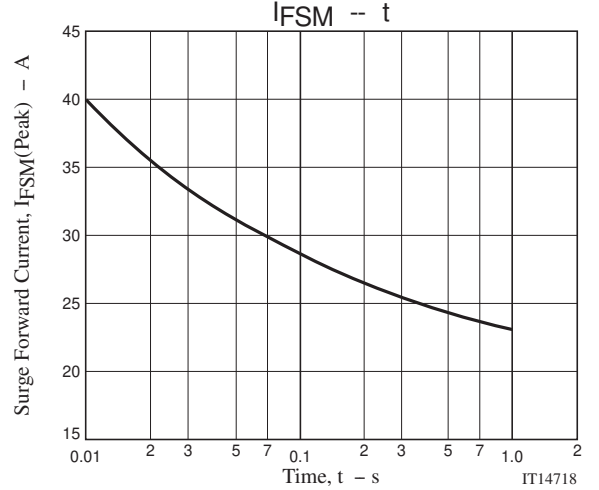
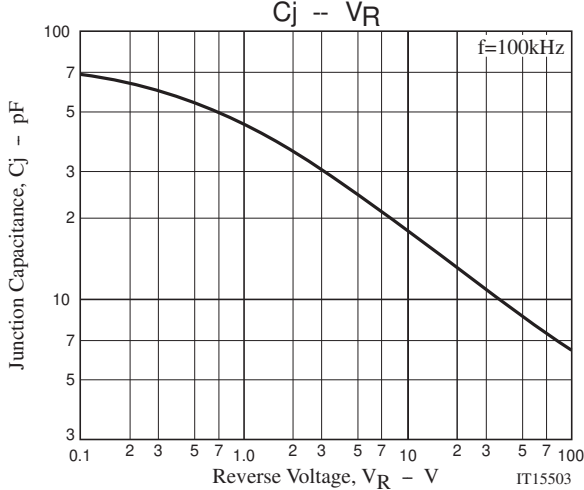
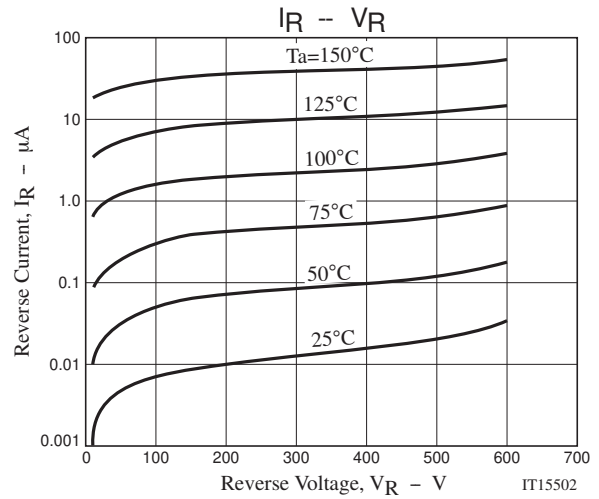
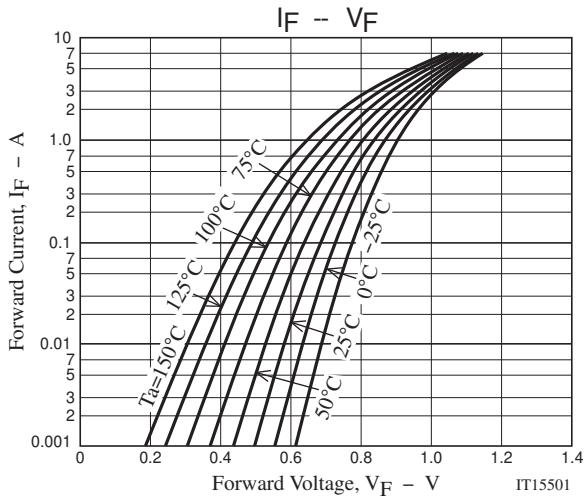
UD0506T

Electrical Characteristics at Ta=25°C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|-----------------------|---------------|--|---------|-----|-----|-----------------------------|
| | | | min | typ | max | |
| Reverse Voltage | V_R | $I_R=1\text{mA}$ | 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

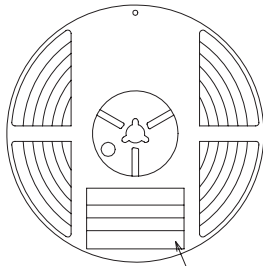
| Package Name | Carrier Tape Type | Maximum Number of devices contained (pcs) | | | Packing format | |
|--------------|-------------------|---|-----------|-----------|---|--|
| | | Reel | Inner box | Outer box | Inner BOX (C-1) | Outer BOX (A-7) |
| TP-FA | TP | 700 | 2,100 | 12,600 | 3 reels contained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

Reel label, Inner box label
(unit:mm)

Outer box label

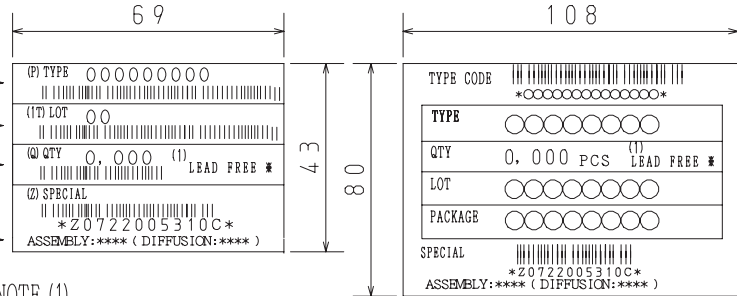
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.

Packing method



Type No.
LOT No.
Quantity
Origin

Reel label



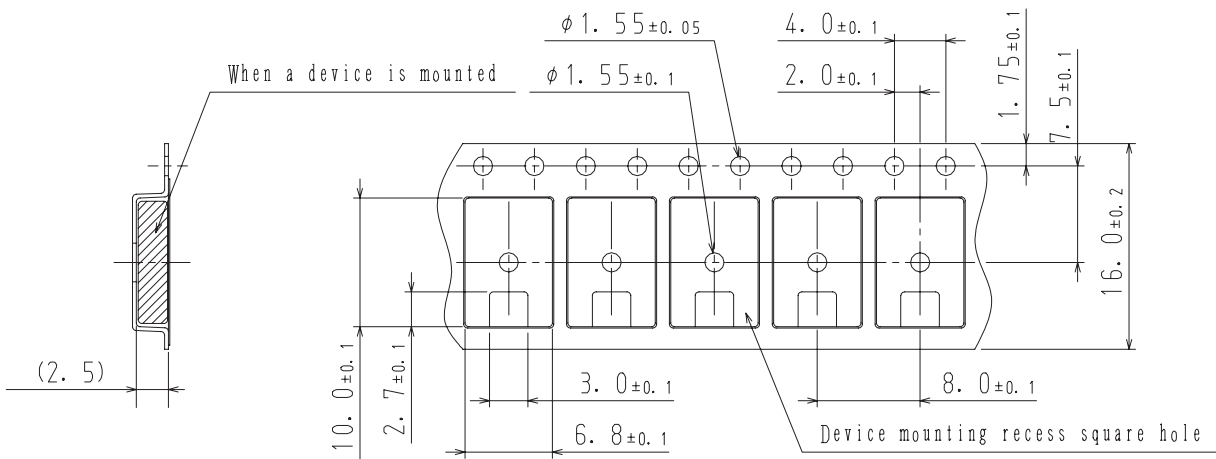
NOTE (1)

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

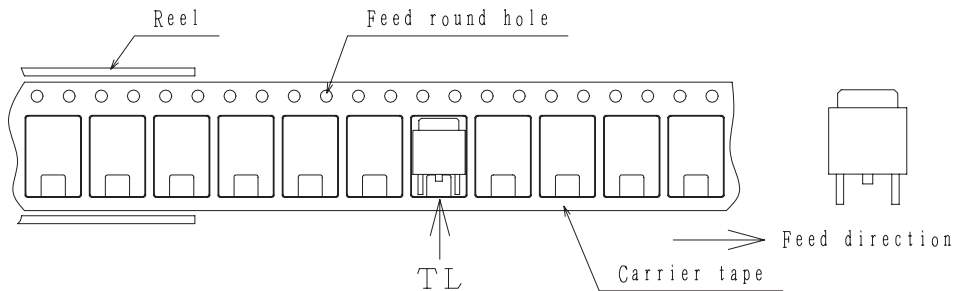
| Label | JEITA Phase |
|-------------|----------------|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3 |

Taping configuration

1. Carrier tape size (unit:mm)



2. Device placement direction

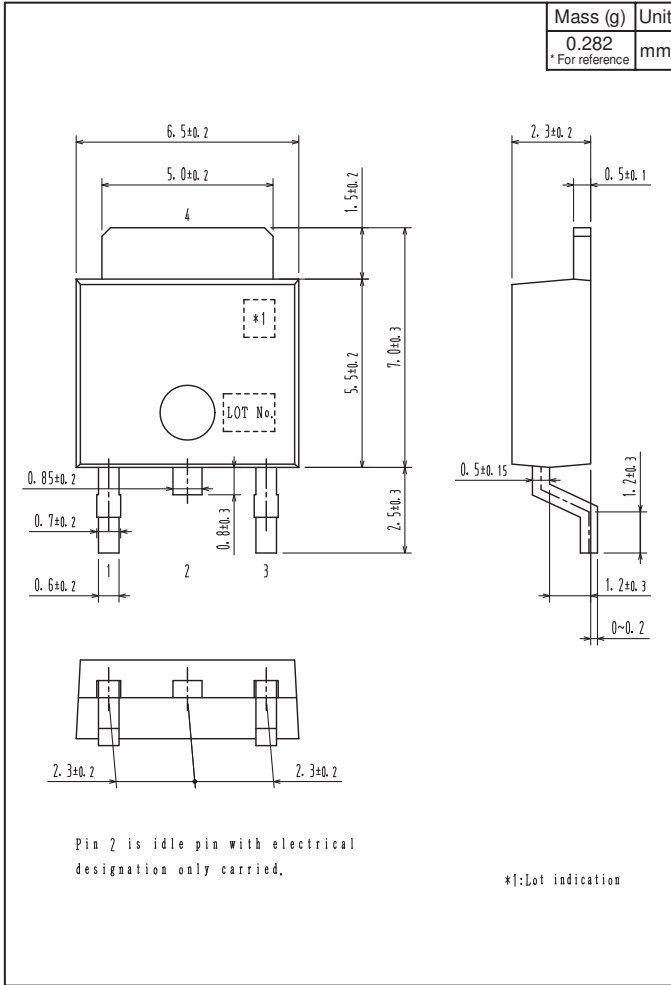


Those with one electrode terminal on the feed hole side.....TL

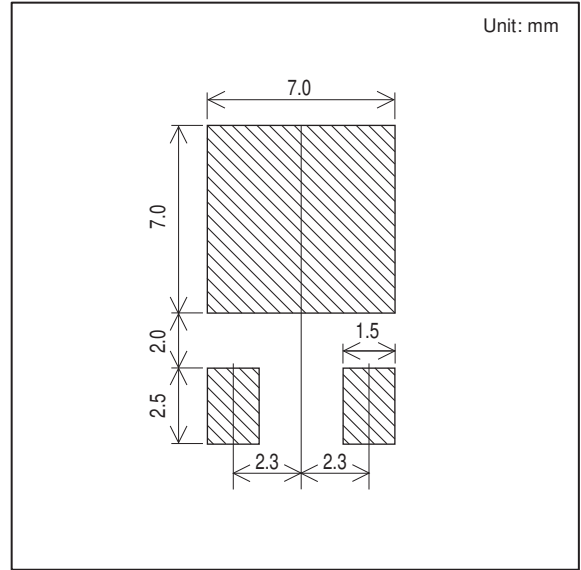
UD0506T

Outline Drawing

UD0506T-TL-H



Land Pattern Example



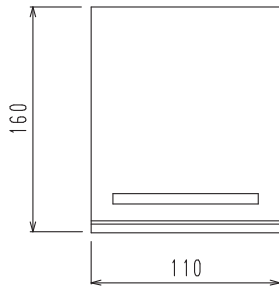
Bag Packing Specification

UD0506T-H

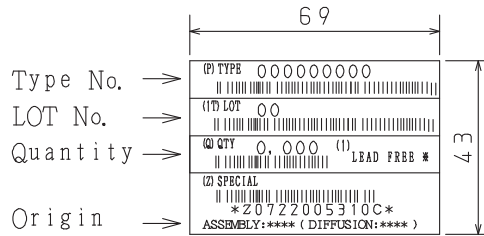
1. Packing Format

| 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)



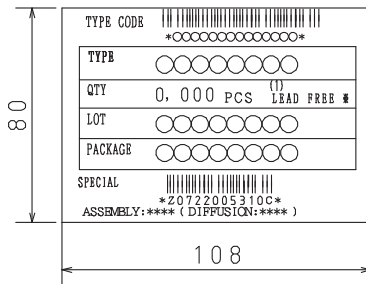
4. Outer box label
(unit:mm)

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.

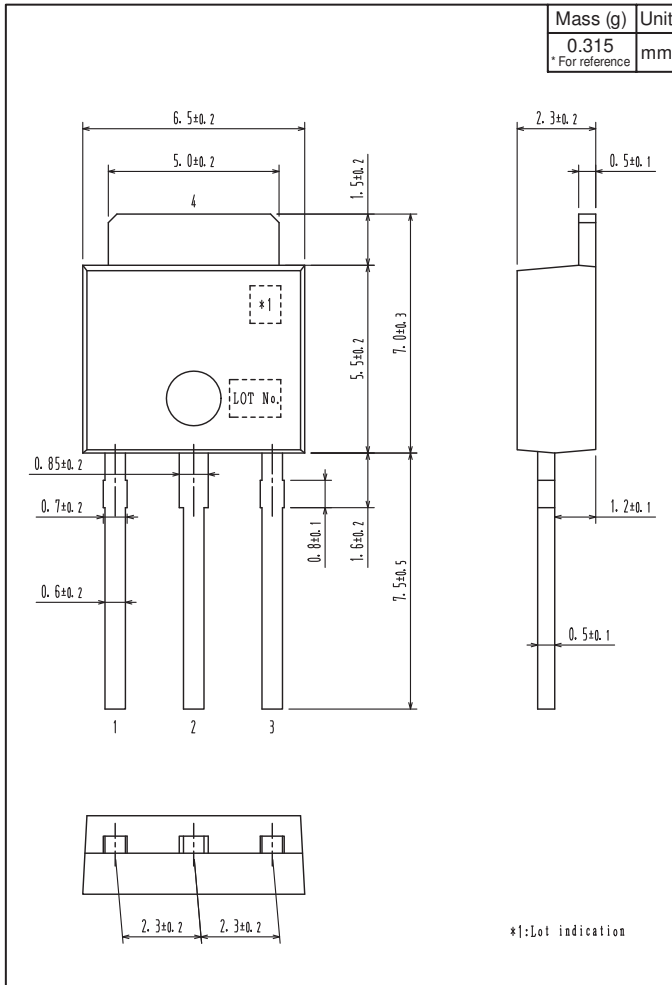
| Label | JEITA Phase |
|-------------|----------------|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3 |



UD0506T

Outline Drawing

UD0506T-H



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