



SB80W06T

Schottky Barrier Diode

60V, 8A, Low IR, Monolithic Dual TP Common Cathode

ON Semiconductor®

<http://onsemi.com>

Applications

- High frequency rectification (switching regulators, converters, choppers)

Features

- Low forward voltage (V_F max=0.6V)
- Low switching noise
- Halogen free compliance
- Fast reverse recovery time
- High reliability due to highly reliable planar structure

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V_{RRM}		60	V
Nonrepetitive Peak Reverse Surge Voltage	V_{RSM}		66	V

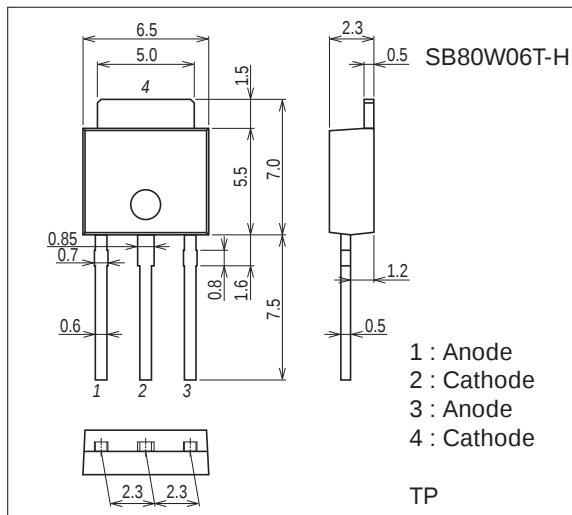
Continued on next page.

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)

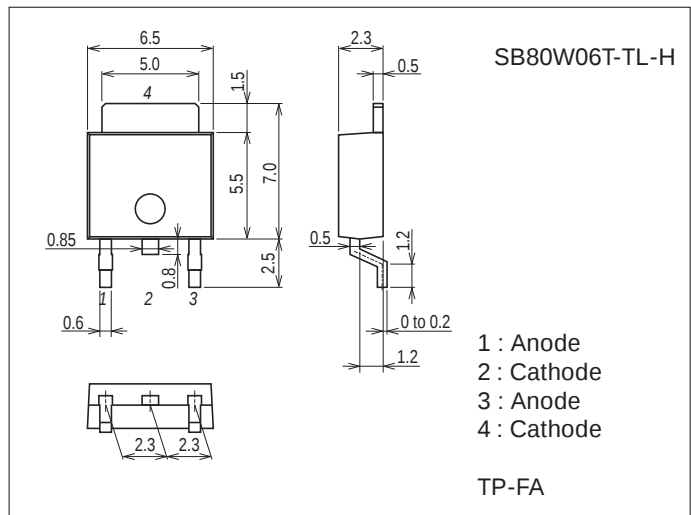
7518-001



Package Dimensions

unit : mm (typ)

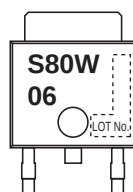
7003-002



Product & Package Information

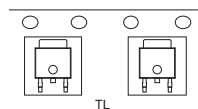
- Package : TP
- JEITA, JEDEC : SC-64, TO-251, SOT-553, DPAK
- Minimum Packing Quantity : 500 pcs./bag

Marking (TP, TP-FA)

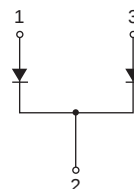


- Package : TP-FA
- JEITA, JEDEC : SC-63, TO-252, SOT-428, DPAK
- Minimum Packing Quantity : 700 pcs./reel

Packing Type (TP-FA) : TL



Electrical Connection



SB80W06T

Continued from preceding page.

Parameter	Symbol	Conditions	Ratings	Unit
Average Output Current	I_O^*2	50Hz resistive load, sine wave $T_c=130^\circ\text{C}$	4	A
	I_O^*1	50Hz resistive load, sine wave $T_c=83^\circ\text{C}$	8	A
Surge Forward Current	I_{FSM}	50Hz sine wave, 1 cycle	40	A
Junction Temperature	T_j		-55 to +150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Note) *1. Indicates the total value

*2. Value per element

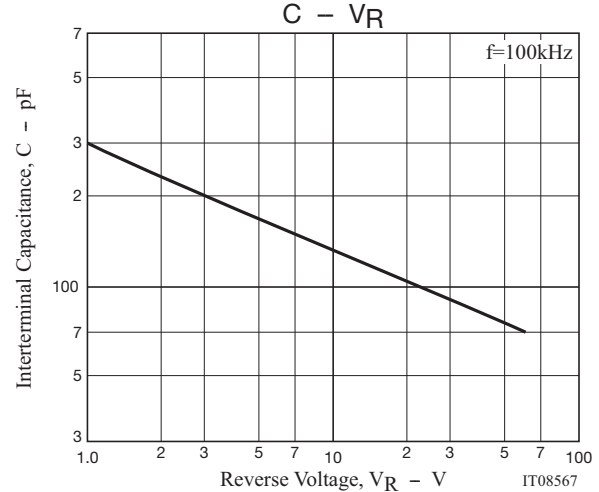
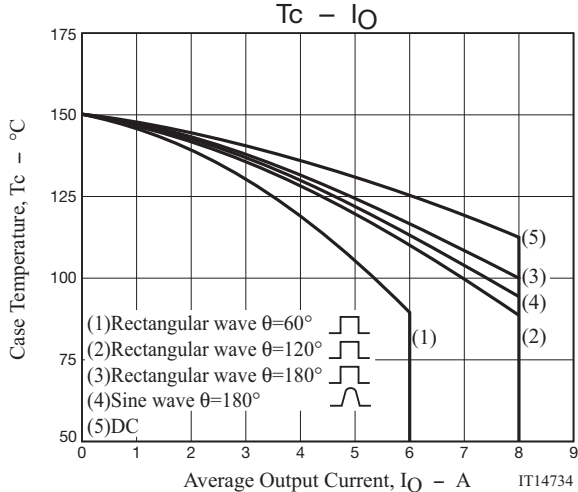
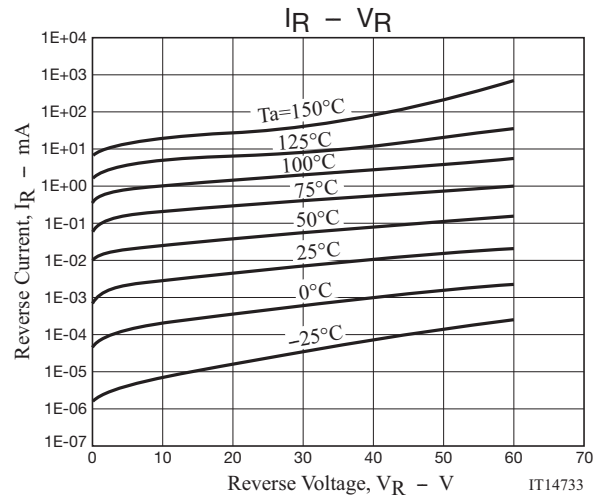
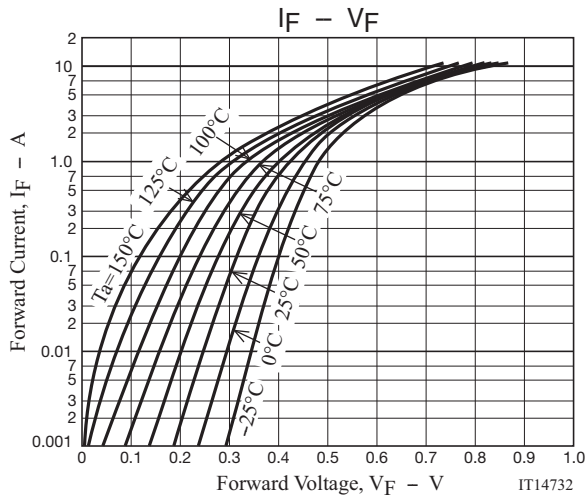
Electrical Characteristics at $T_a=25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	$I_R=1\text{mA}$, $T_j=25^\circ\text{C}$ *2	60			V
Forward Voltage	V_F	$I_F=3.0\text{A}$, $T_j=25^\circ\text{C}$ *2			0.6	V
Reverse Current	I_R	$V_R=30\text{V}$, $T_j=25^\circ\text{C}$ *2			0.1	mA
Interterminal Capacitance	C	$V_R=10\text{V}$, $T_j=25^\circ\text{C}$ *2		130		pF
Transient Thermal Resistance	$R_{th(j-c)}$	Junction-Case : Smoothed DC		6		$^\circ\text{C} / \text{W}$

Note) *2. Value per element

Ordering Information

Device	Package	Shipping	memo
SB80W06T-H	TP	500pcs./bag	Pb Free and Halogen Free
SB80W06T-TL-H	TP-FA	700pcs./reel	



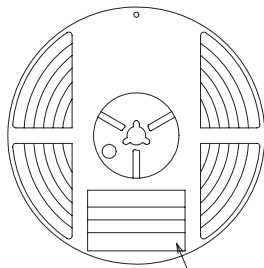
Taping Specification

SB80W06T-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

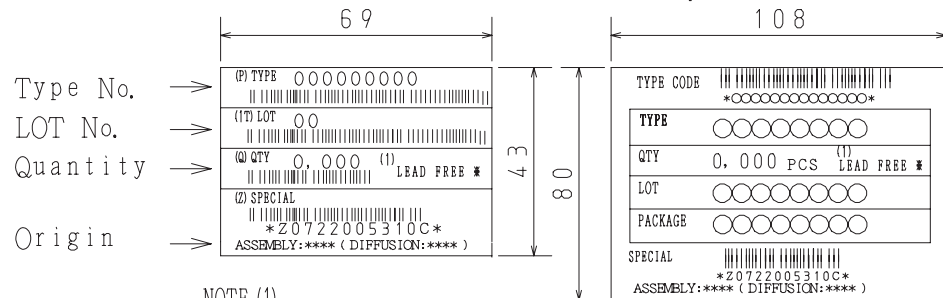


Reel label

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.



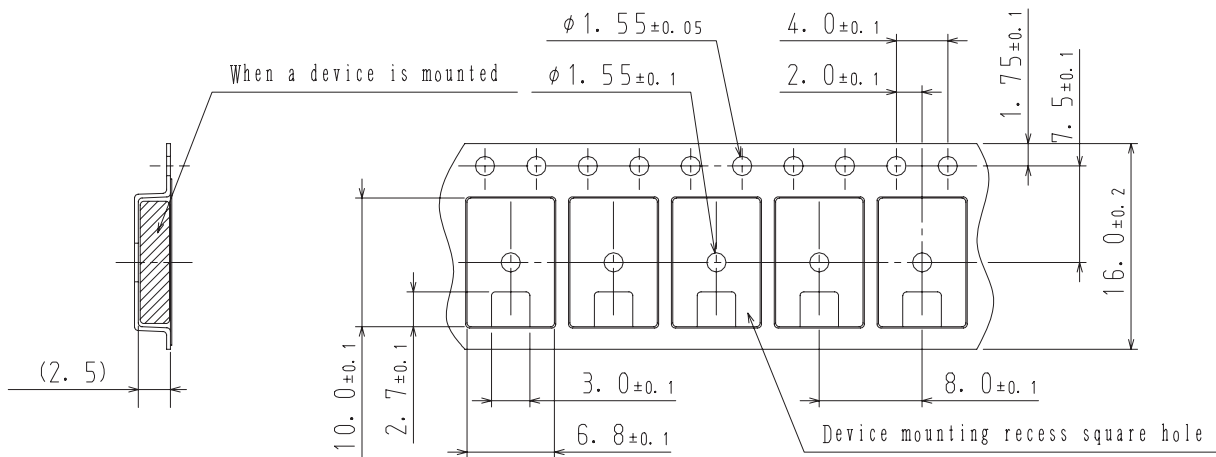
NOTE (1)

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

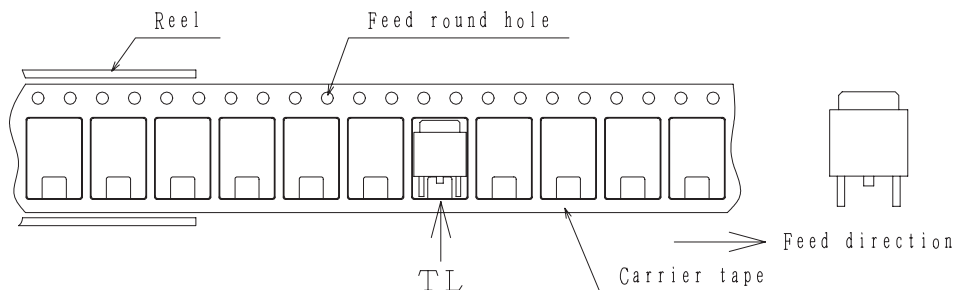
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

Taping configuration

1. Carrier tape size (unit:mm)



2. Device placement direction



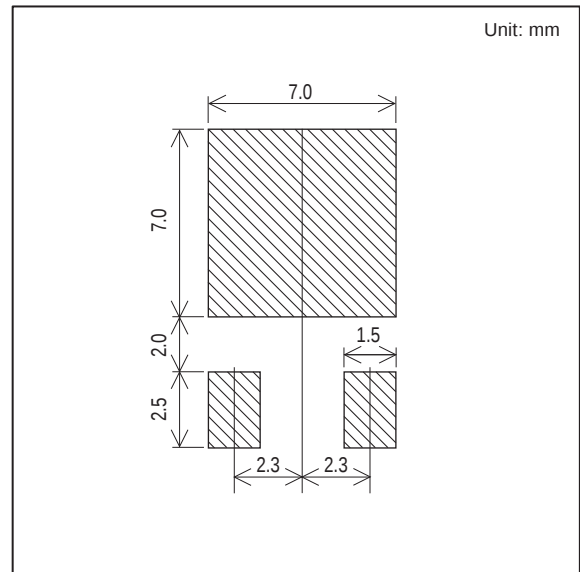
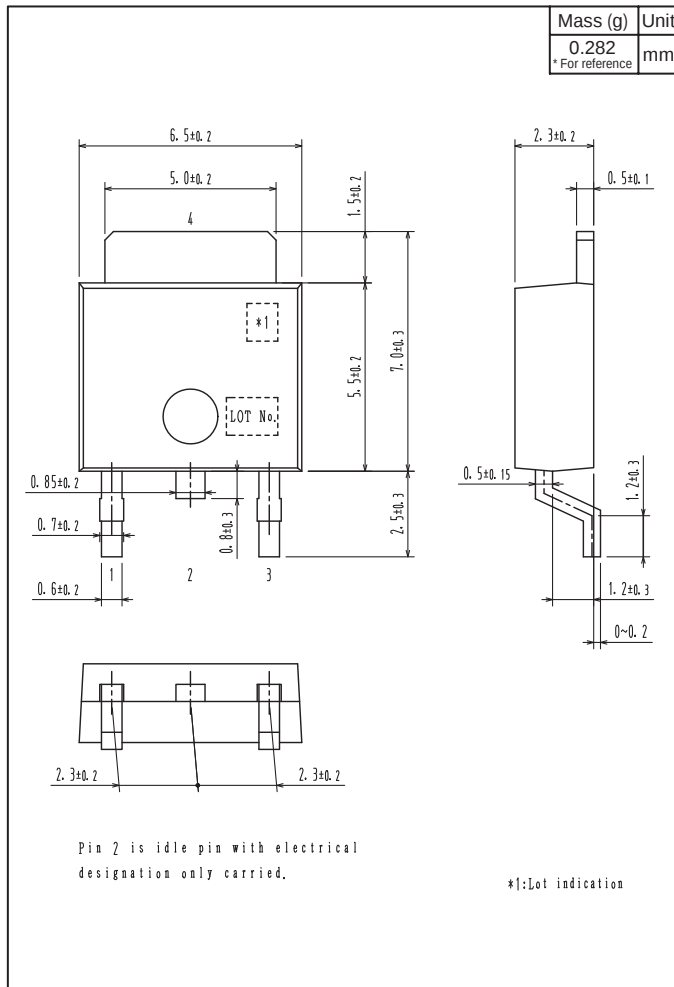
Those with one electrode terminal on the feed hole side.....TL

SB80W06T

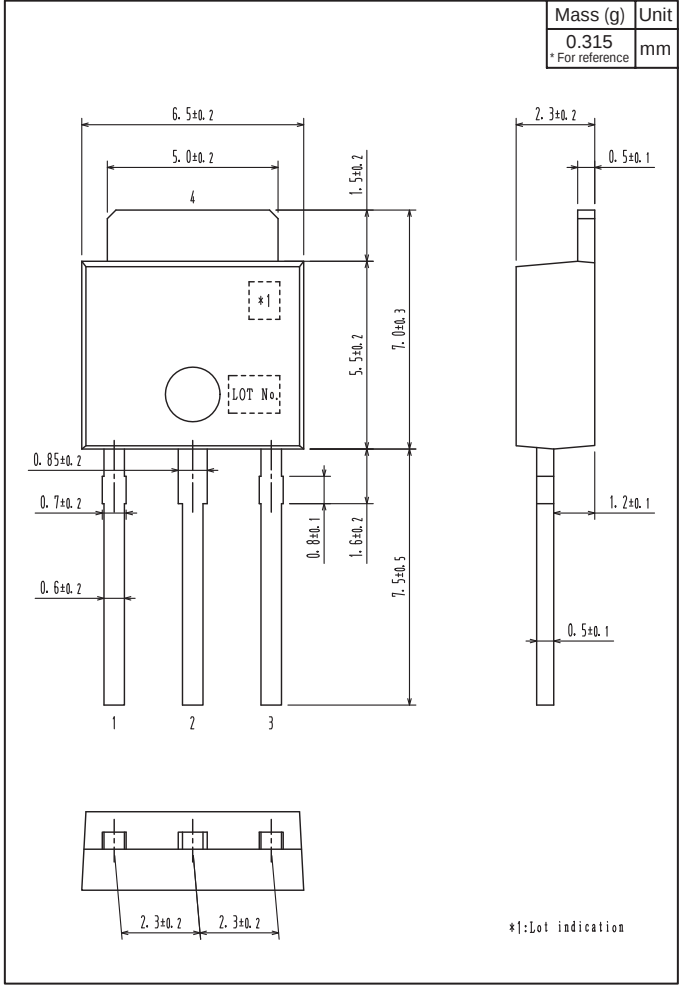
Outline Drawing

SB80W06T-TL-H

Land Pattern Example



Outline Drawing
SB80W06T-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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[ON Semiconductor:](#)

[SB80W06T-H](#) [SB80W06T-TL-H](#)