



SB05-05P

Schottky Barrier Diode 50V, 0.5A, Low IR, Single PCP

ON Semiconductor®

http://onsemi.com

Applications

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

Features

- Low forward voltage (VF max=0.55V)
- Low switching noise
- Low leakage current and high reliability due to highly reliable planar structure
- Fast reverse recovery time (trr max=10ns)

Specifications

Absolute Maximum Ratings at Ta=25°C

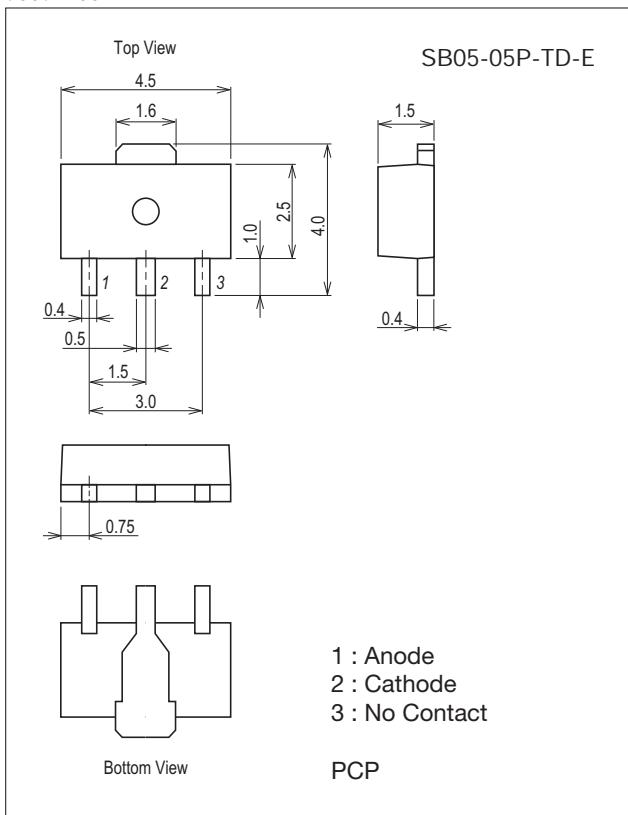
Parameter	Symbol	Conditions	Ratings	Unit
Repetitive Peak Reverse Voltage	V _{RRM}		50	V
Nonrepetitive Peak Reverse Surge Voltage	V _{RSM}		55	V
Average Output Current	I _O		500	mA
Surge Forward Current	I _{FSM}	50Hz sine wave, 1 cycle	5	A
Junction Temperature	T _j		-55 to +125	°C
Storage Temperature	T _{stg}		-55 to +125	°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)

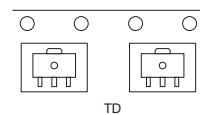
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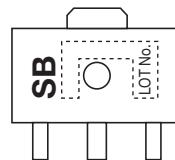
Product & Package Information

- Package : PCP
- JEITA, JEDEC : SC-62, SOT-89, TO-243
- Minimum Packing Quantity : 1,000 pcs./reel

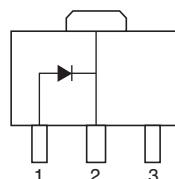
Packing Type: TD



Marking

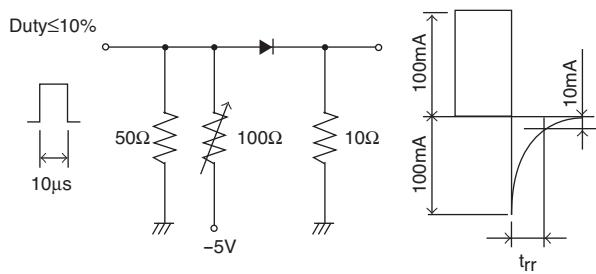


Electrical Connection



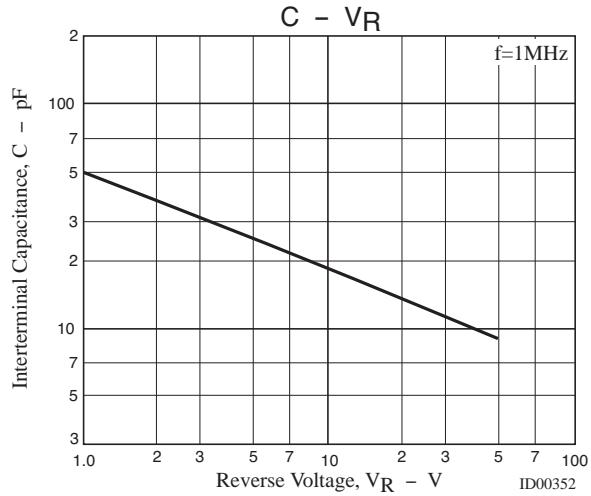
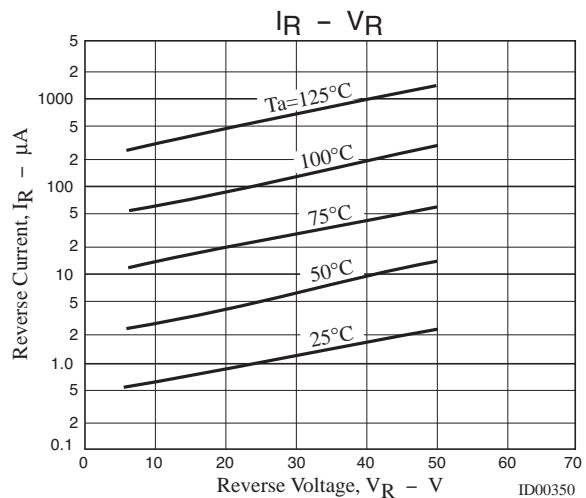
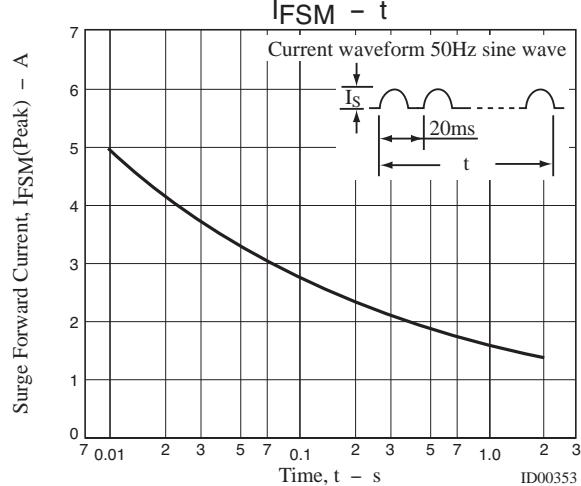
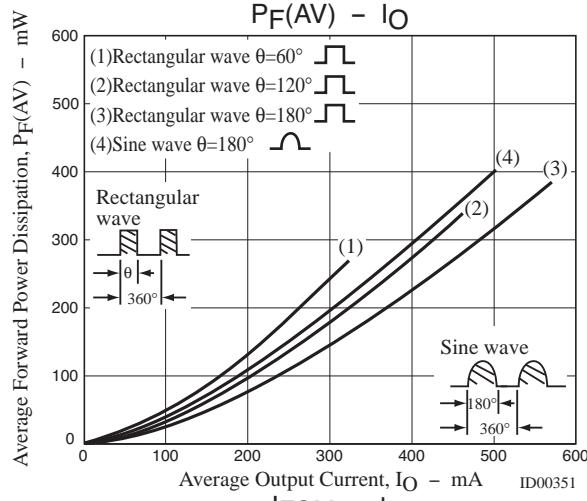
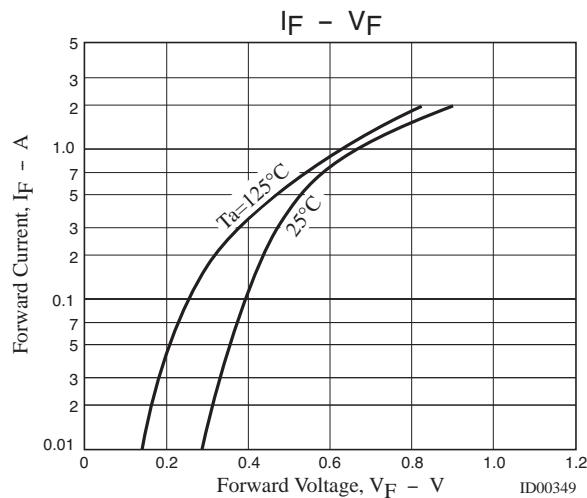
Electrical Characteristics at $T_a=25^{\circ}\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reverse Voltage	V_R	$I_R=200\mu\text{A}$	50			V
Forward Voltage	V_F	$I_F=500\text{mA}$			0.55	V
Reverse Current	I_R	$V_R=25\text{V}$			50	μA
Interterminal Capacitance	C	$V_R=10\text{V}, f=1\text{MHz}$		18		pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=100\text{mA}$, See specified Test Circuit.			10	ns
Thermal Resistance	$R_{th(j-a)1}$			310		$^{\circ}\text{C} / \text{W}$
	$R_{th(j-a)2}$	When mounted on ceramic substrate (250mm 2 ×0.8mm)		120		$^{\circ}\text{C} / \text{W}$

 t_{rr} Test Circuit

Ordering Information

Device	Package	Shipping	memo
SB05-05P-TD-E	PCP	1,000pcs./reel	Pb Free

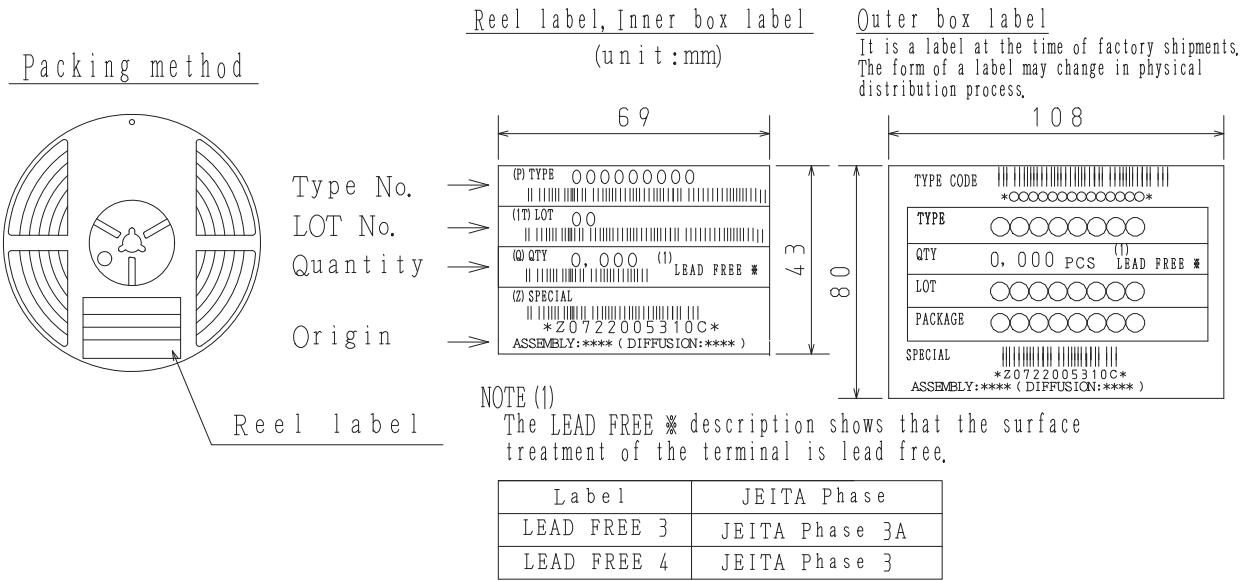


Embossed Taping Specification

SB05-05P-TD-E

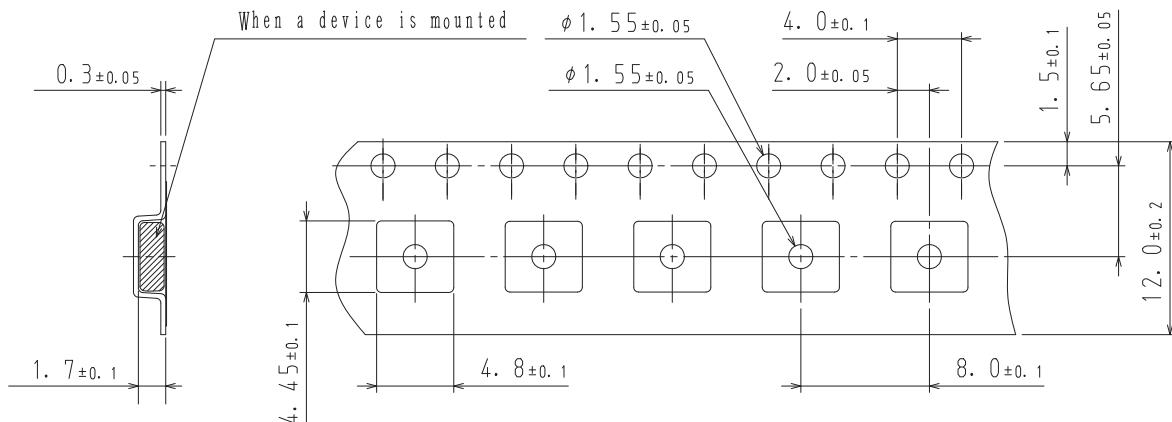
1. Packing Format

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)
PCP	PCP	1,000	4,000	24,000	4 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

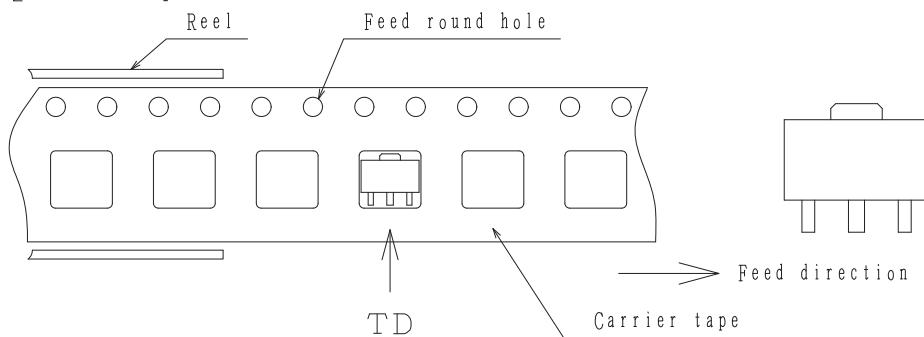


2. Taping configuration

2-1. Carrier tape size (unit:mm)

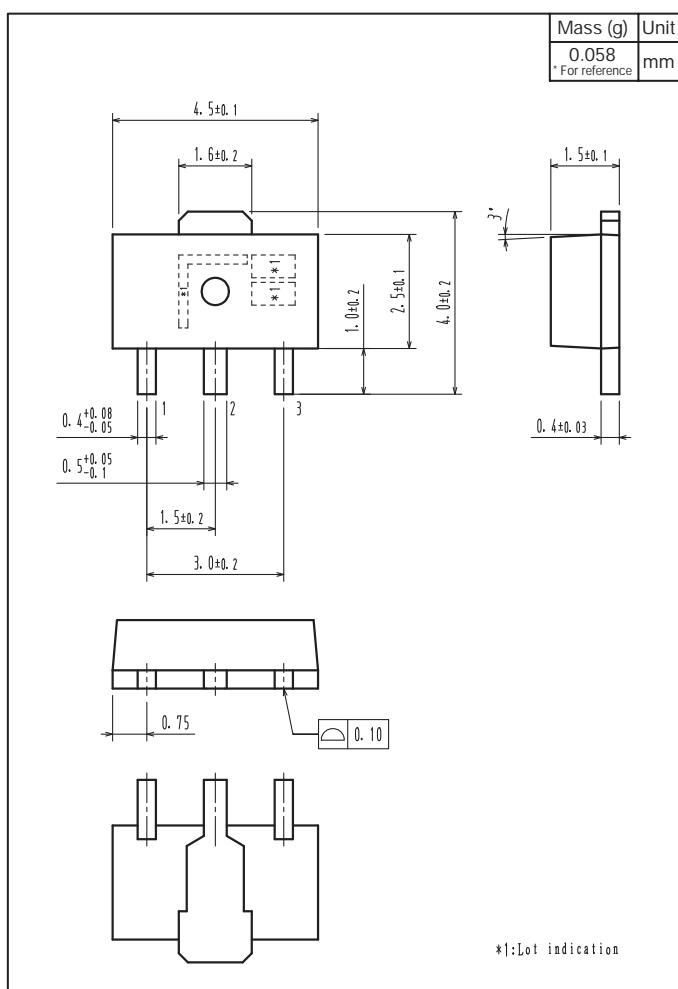


2-2. Device placement direction

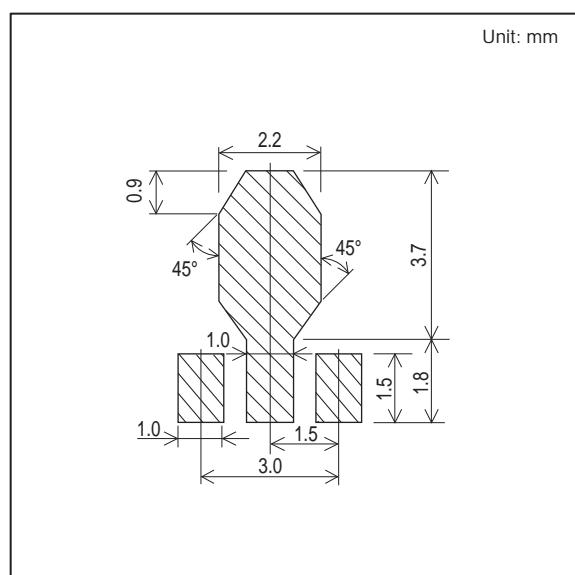


Outline Drawing

SB05-05P-TD-E



Land Pattern Example



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