



# SB10-05P

## Schottky Barrier Diode 50V, 1A, Low IR, Single

ON Semiconductor®

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### Applications

- High Frequency Rectification (Switching Regulators, Converters, Choppers)

### Features

- Low Forward Voltage ( $V_F \text{ max}=0.55\text{V}$ )
- Short Reverse Recovery Time ( $t_{rr} \text{ max}=10\text{ns}$ )
- Low Switching Noise
- Low Leakage Current and High Reliability Due to Reliable Planar Structure
- Pb-Free and RoHS Compliance

### Specifications

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

Parameter	Symbol	Conditions	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$		50	V
Non-repetitive Peak Reverse Surge Voltage	$V_{RSM}$		55	V
Average Output Current	$I_O$		1	A
Surge Forward Current	$I_{FSM}$	50Hz sine wave, 1 cycle	10	A
Junction Temperature	$T_j$		-55 to +125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +125	$^\circ\text{C}$

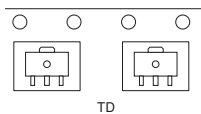
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

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

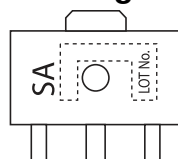
Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Reverse Voltage	$V_R$	$I_R=300\mu\text{A}$	50			V
Forward Voltage	$V_F$	$V_F=1\text{A}$			0.55	V
Reverse Current	$I_R$	$V_R=25\text{V}$			80	$\mu\text{A}$
Interterminal Capacitance	C	$V_R=10\text{V}$ , $f=1\text{MHz}$		52		pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=100\text{mA}$ , See specification Test Circuit			10	ns
Thermal Resistance	Rthj-a (1)			300		$^\circ\text{C} / \text{W}$
	Rthj-a (2)	Mounted on a ceramic board (250mm <sup>2</sup> x0.8mm)		110		$^\circ\text{C} / \text{W}$

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

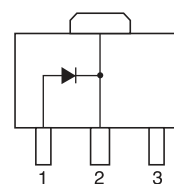
### Packing Type : TD



### Marking



### Electrical Connection

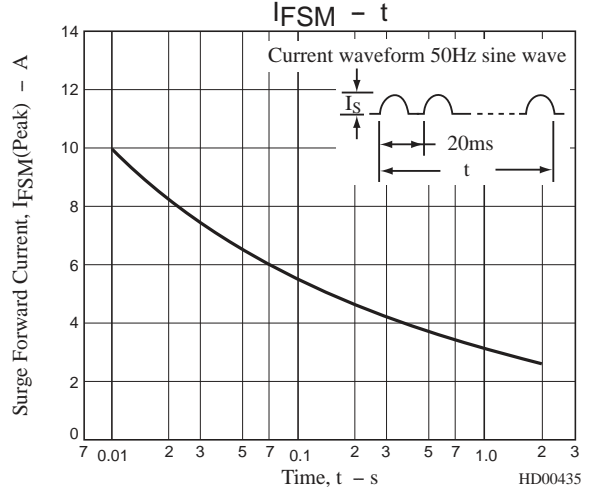
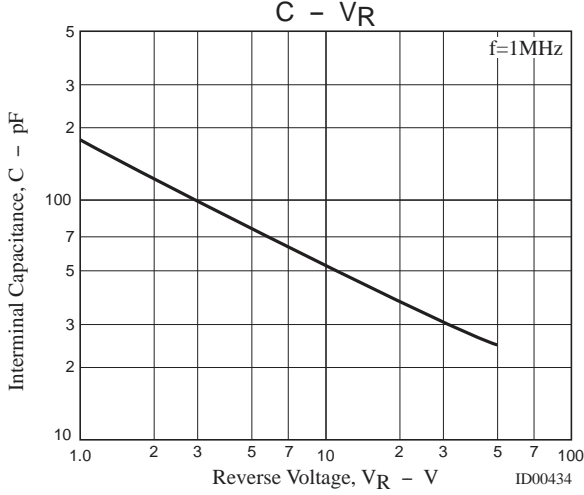
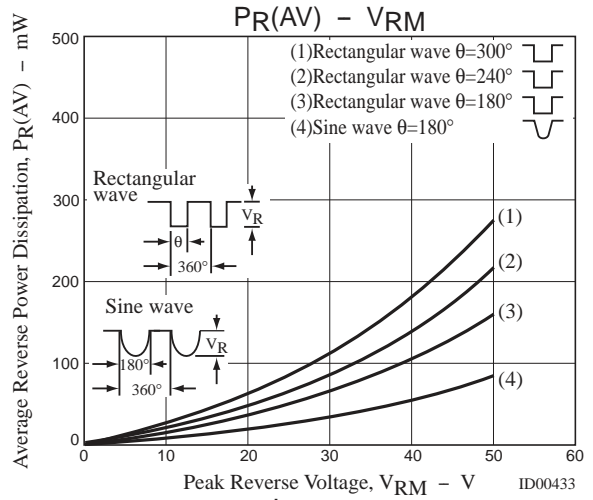
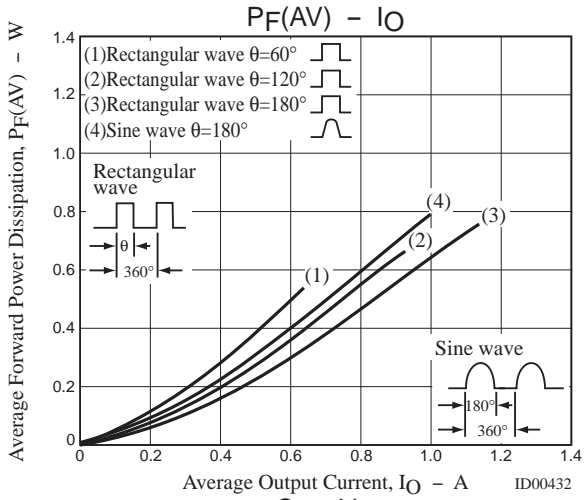
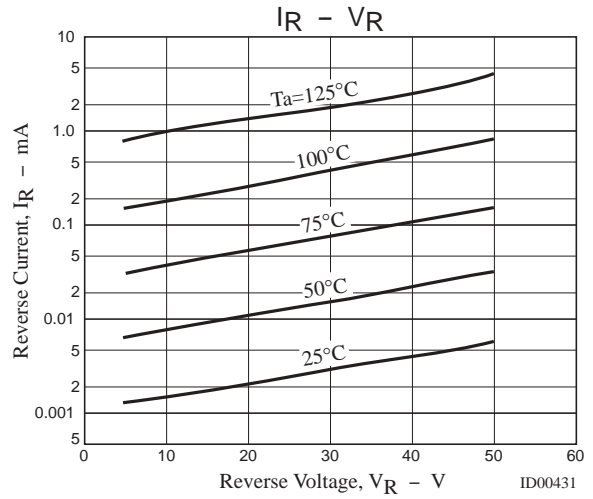
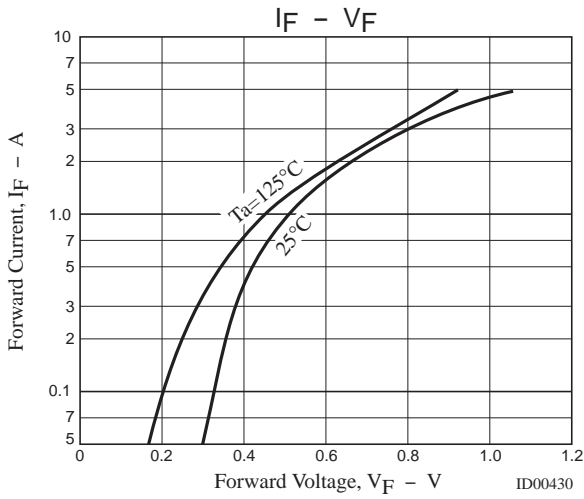


- 1 : Anode
- 2 : Cathode
- 3 : No Contact

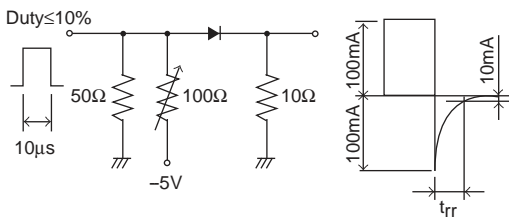
SOT-89 / PCP-1

### ORDERING INFORMATION

See detailed ordering and shipping information on page 4 of this data sheet.



**trr Test Circuit**



# SB10-05P

## Package Dimensions

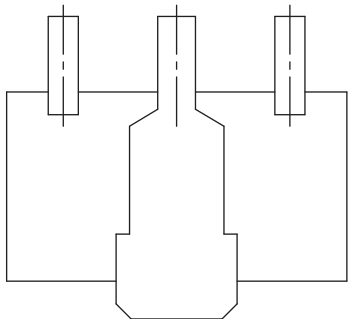
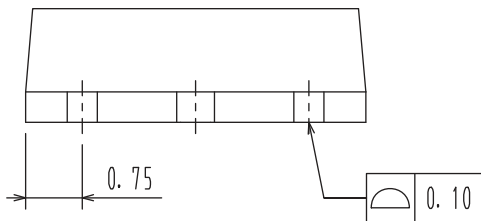
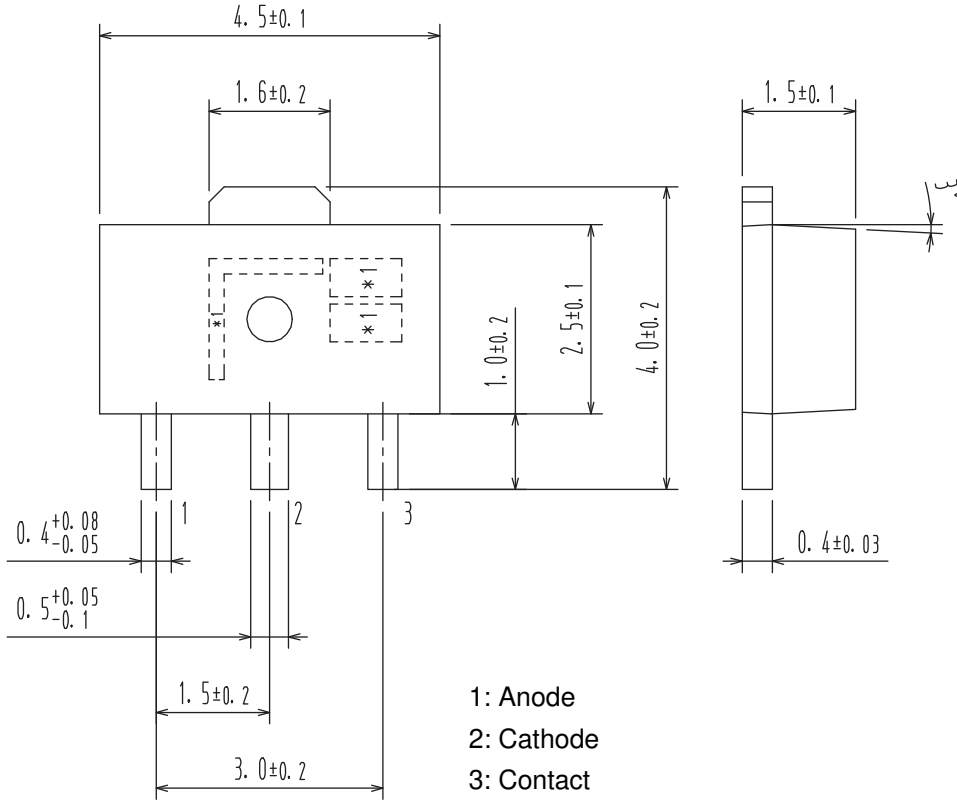
SB10-05P-TD-E

unit : mm

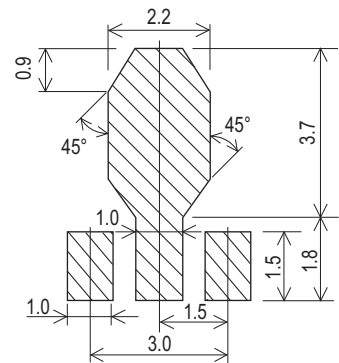
SOT-89 / PCP-1

CASE 419AU

ISSUE O



## Recommended Soldering Footprint



**ORDERING INFORMATION**

Device	Package	Shipping	Note
SB10-05P-TD-E	SOT-89, PCP-1	1,000 / Tape and Reel	Pb-Free

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