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

Specifications

Absolute Maximum Ratings at Ta = 25°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	Tj		–55 to +125	°C
Storage Temperature	Tstg		–55 to +125	°C

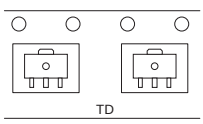
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

Electrical Characteristics at Ta = 25°C

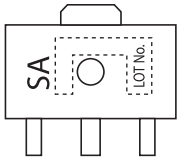
Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
Reverse Voltage	V_R	I_R=300μA	50			V
Forward Voltage	V_F	V_F=1A			0.55	V
Reverse Current	I_R	V_R=25V			80	μA
Interterminal Capacitance	C	V_R=10V, f=1MHz		52		pF
Reverse Recovery Time	t_{rr}	I_F= I_R=100mA, See specification Test Circuit			10	ns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

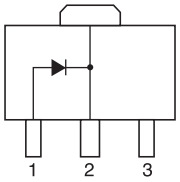
Packing Type : TD



Marking



Electrical Connection



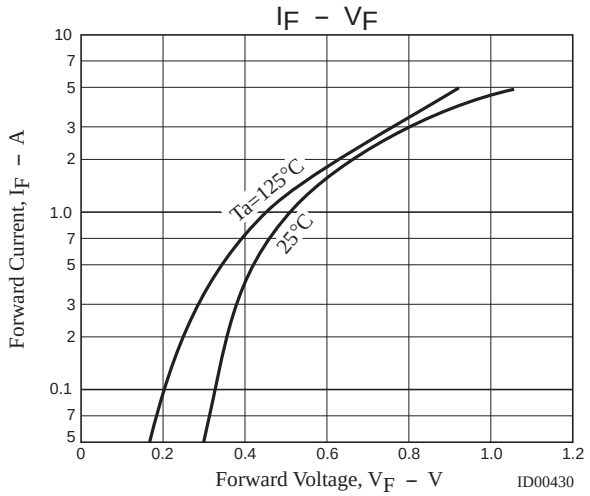
1 : Anode
2 : Cathode
3 : No Contact

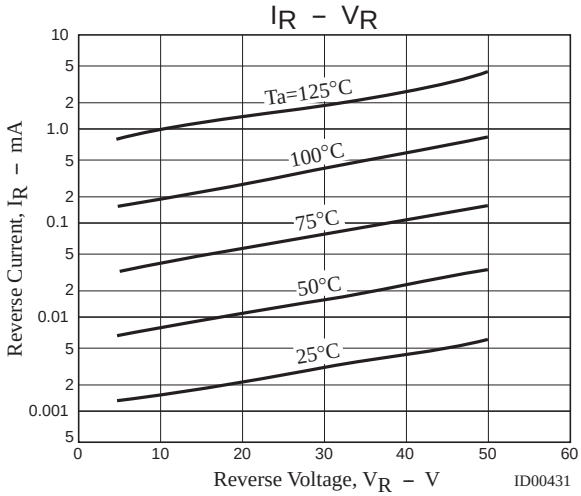
SOT-89 / PCP-1

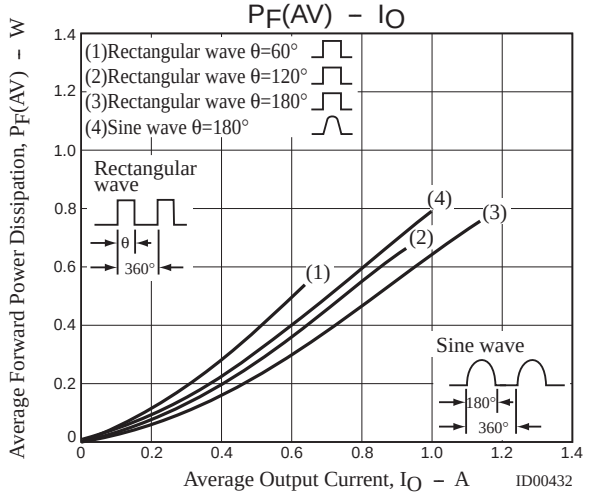
ORDERING INFORMATION

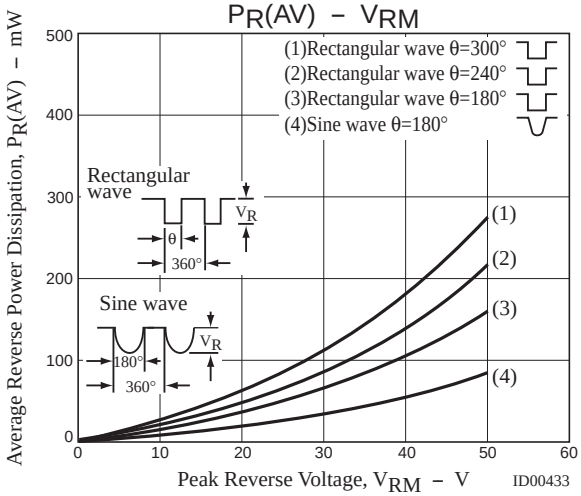
See detailed ordering and shipping information on page 4 of this data sheet.

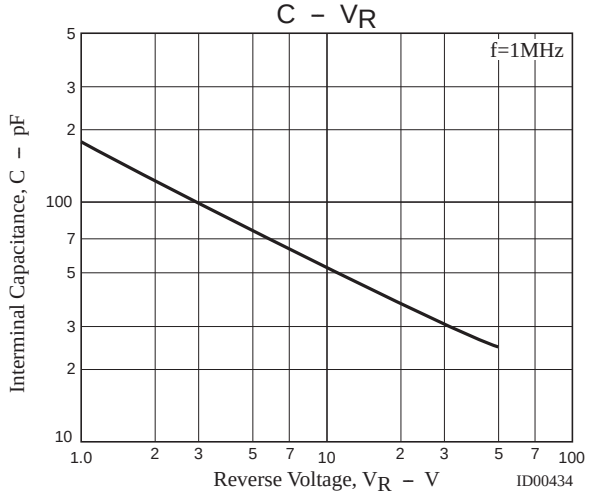
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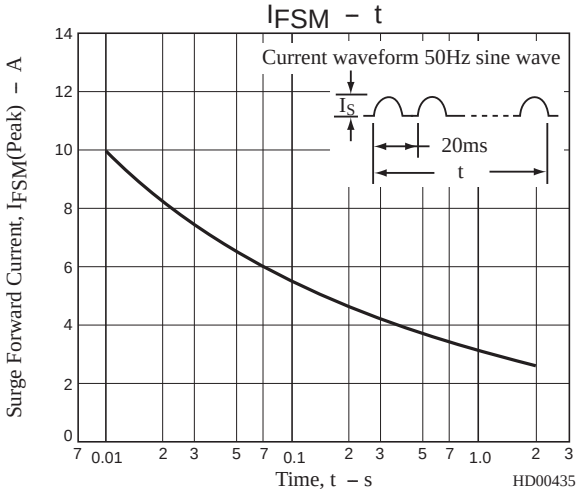




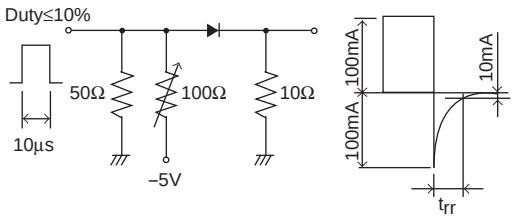








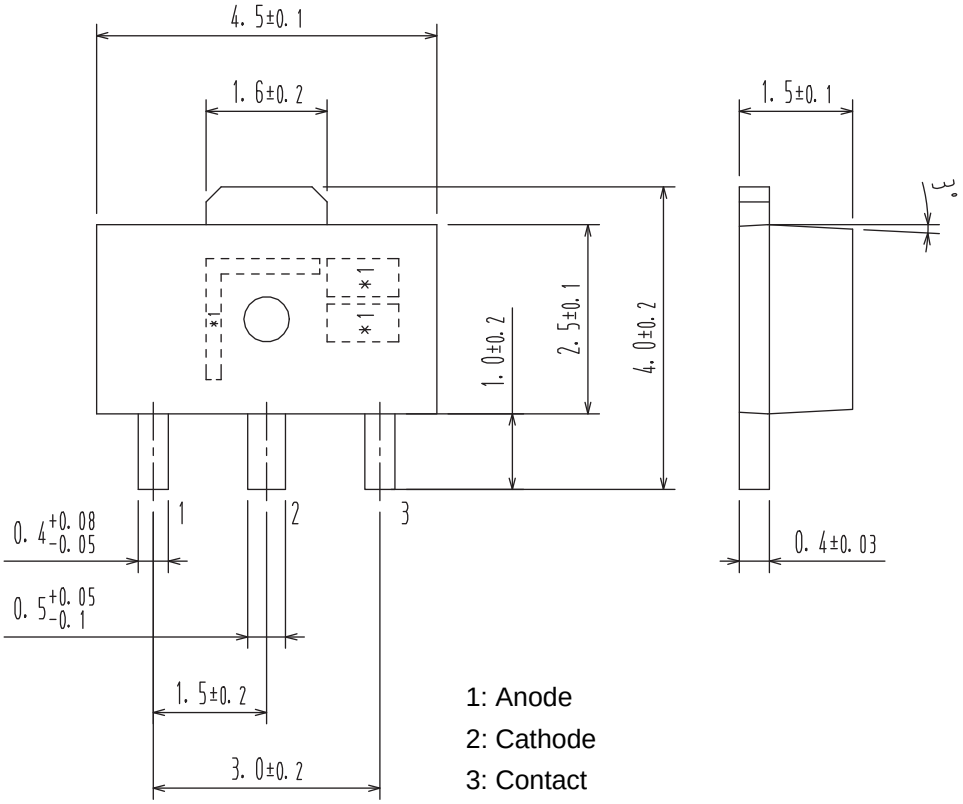
t_{rr} Test Circuit



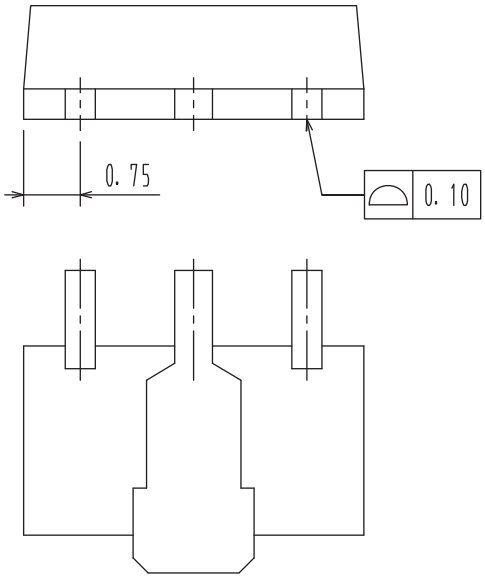
Package Dimensions

SB10-05P-TD-E
unit : mm

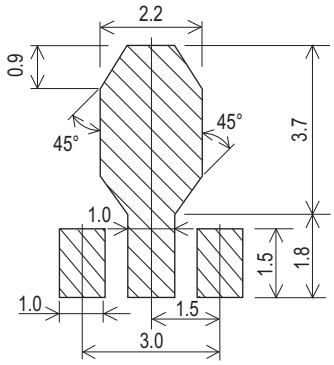
SOT-89 / PCP-1
CASE 419AU
ISSUE O



1: Anode
2: Cathode
3: Contact



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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