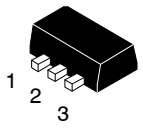
Schottky Barrier Diode

30 V, 2 A, Low IR, Single PCP

SB20-03P



SOT−89 / PCP−1
CASE 419AU

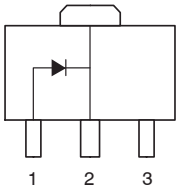
Features

- Low Forward Voltage (V_F max = 0.55 V)
- Fast Reverse Recovery Time (t_{rr} max = 20 ns)
- Low Switching Noise
- Low Leakage Current and High Reliability due to Highly Reliable Planar Structure
- These Devices are Pb−Free and are RoHS Compliant

Applications

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

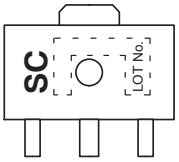
ELECTRICAL CONNECTION



1: Anode
2: Cathode
3: No Contact

PCP

MARKING DIAGRAM



SPECIFICATIONS

ABSOLUTE MAXIMUM RATINGS at T_A = 25°C

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Nonrepetitive Peak Reverse Voltage	V_{RSM}	35	V
Average Output Current	I_O	2	A
Surge Forward Current (Note 1)	I_{FSM}	20	A
Junction Temperature	T_J	−55 to +125	°C
Storage Temperature	T_{STG}	−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.

1. Conditions: 50 Hz sine wave, 1 cycle

ORDERING INFORMATION

Device	Package	Shipping†
SB20−03P−TD−E	PCP (Pb−Free)	1000 / Tape & Reel

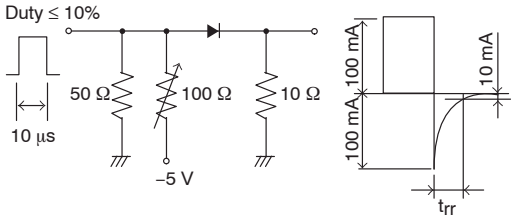
†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

ELECTRICAL CHARACTERISTICS at T_A = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			Min	Typ	Max	
Reverse Voltage	V_R	I_R = 500 μA	30			V
Forward Voltage	V_F	I_F = 2 A			0.55	V
Reverse Current	I_R	V_R = 15 V			100	μA
Interterminal Capacitance	C	V_R = 10 V, f = 1 MHz		70		pF
Reverse Recovery Time	t_{rr}	I_F = I_R = 100 mA, See specified Test Circuit			20	ns
Thermal Resistance	Rth(j−a)1			300		°C/W
	Rth(j−a)2	When mounted on ceramic substrate (250 mm^2 x 0.8 mm)		110		°C/W

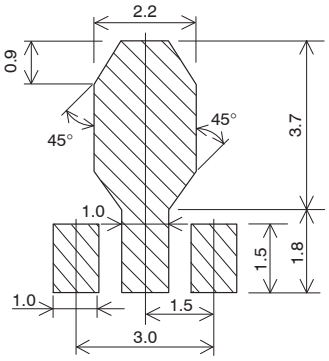
Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

t_{rr} Test Circuit



Land Pattern Example

Unit: mm



TYPICAL CHARACTERISTICS

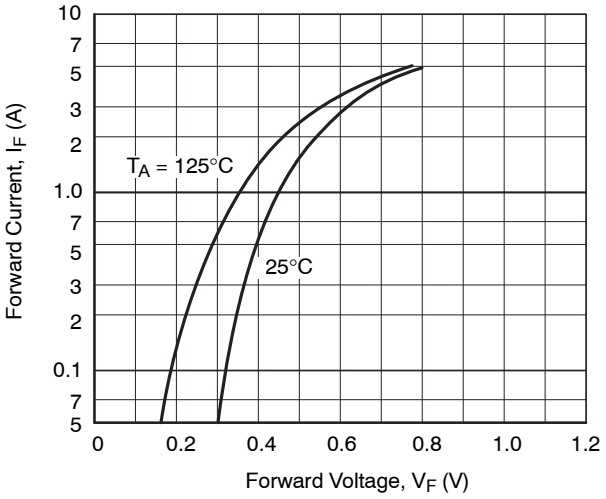


Figure 1. I_F – V_F

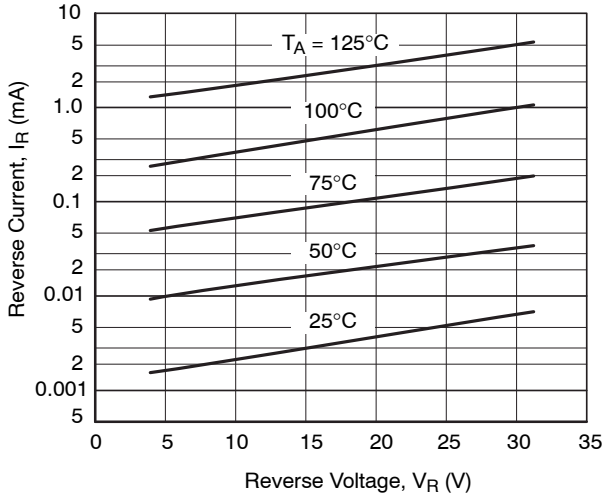


Figure 2. I_R – V_R

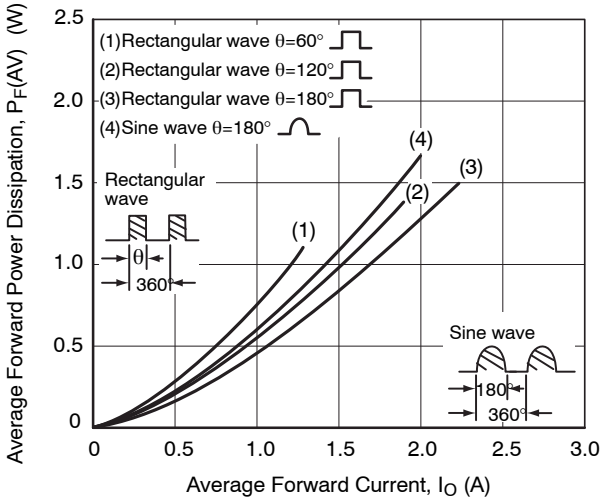


Figure 3. $P_{F(AV)}$ – I_O

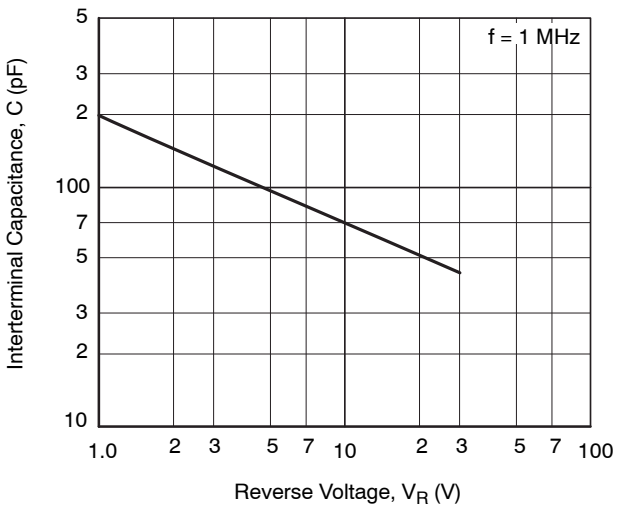


Figure 4. C – V_R

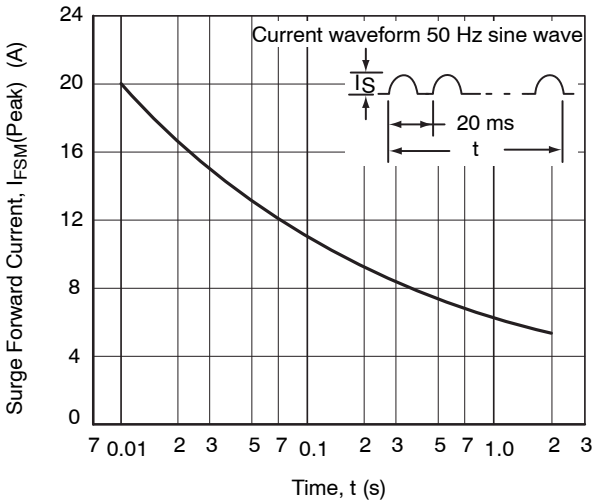
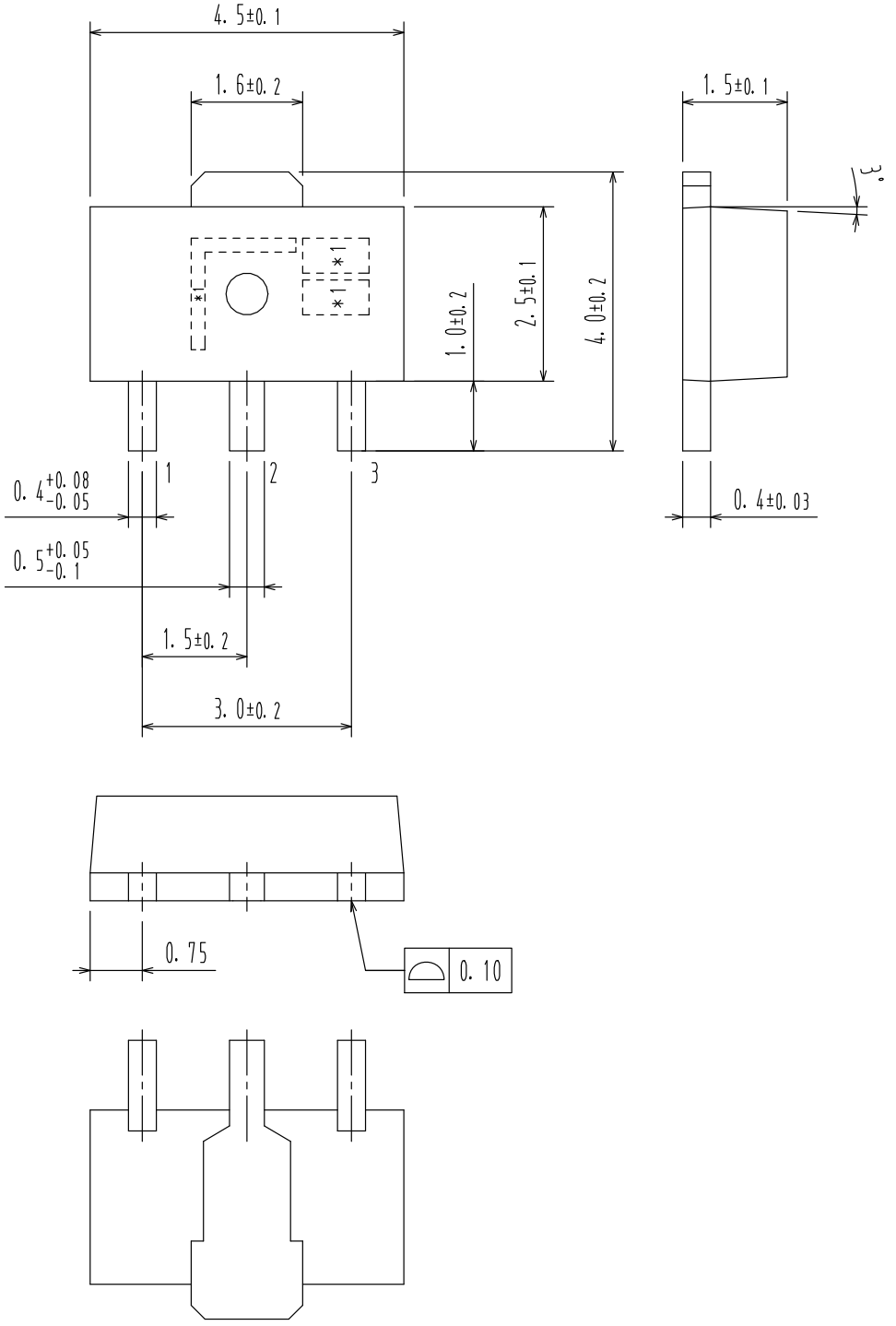


Figure 5. I_{FSM} – t

SOT−89 / PCP−1
CASE 419AU
ISSUE O

DATE 30 APR 2012



DOCUMENT NUMBER:	**98AON79746E**	Electronic versions are uncontrolled except when accessed directly from the Document Repository. Printed versions are uncontrolled except when stamped "CONTROLLED COPY" in red.	
DESCRIPTION:	**SOT−89 / PCP−1**		**PAGE 1 OF 1**

ADDITIONAL INFORMATION

TECHNICAL PUBLICATIONS:
Technical Library: www.onsemi.com/design/resources/technical−documentation
onsemi Website: www.onsemi.com

ONLINE SUPPORT: www.onsemi.com/support
For additional information, please contact your local Sales Representative at www.onsemi.com/support/sales