0.6A,20-100V Schottky Barrier Rectifiers

Features

- Low leakage current
- Schottky barrier diodes
- Low forward voltage drop
- For general purpose applications
- Moisture sensitivity: level 1, per J-STD-020
- For fast switching and low logic level applications
- High temperature soldering guaranteed: 260℃/10 seconds

R-1

Applications

- Small battery charger, Power supplies

Maximum Ratings & Electrical Characteristics (TA=25℃ unless otherwise noted)

Parameter	Symbol	SB020	SB030	SB040	SB050	SB060	SB070	SB080	SB090	SB0B0	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	49	56	63	70	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	70	80	90	100	V
Maximum average forward rectified current	$I_{F(AV)}$	0.6									A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load per diode	I_{FSM}	20									A
Operating junction temperature range	T_J	-55 to +125			-55 to +150						°C
Storage temperature range	T_{STG}	-55 to +150									°C

Thermal-Mechanical Specifications (TA=25℃ unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	72	°C /W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	14	°C /W
Thermal Resistance, Junction to Lead	$R_{\theta JL}$	13	°C /W

Electrical Specifications (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	SB020	SB030	SB040	SB050	SB060	SB070	SB080	SB090	SB0B0	Unit
Forward Drop Voltage	V_F	I_F=0.6A	0.50			0.70		0.79				V
Reverse leakage current @V_R	I_R	T_J =25℃	0.10					0.06				mA
		T_J =125℃	10			8		5				
Typical junction capacitance	C_J	4.0 V 1 MHZ	110									pF

Note：

1. Valid provided that leads at a distance of 9.5 mm from case are kept at ambient temperature.

Ratings and Characteristics Curves

(T_A = 25℃ unless otherwise noted)

FIG.1-Typ FORWARD SURGE CURRENT

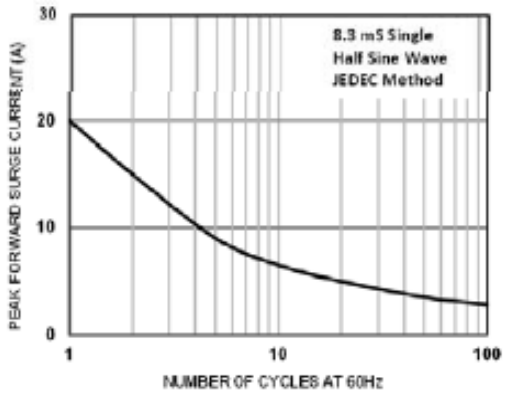


FIG.2-FORWARD CURRENT DERATING CURVE

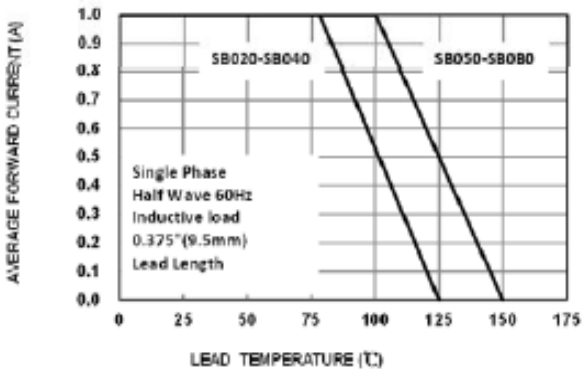


FIG.3-Typ JUNCTION CAPACITANCE

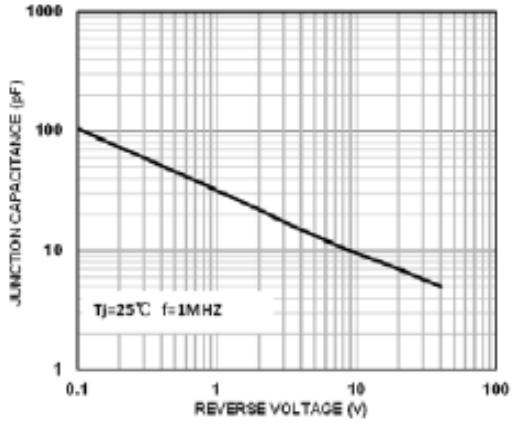


FIG.4-Typ INSTANTANEOUS FORWARD CHARACTERISTICS

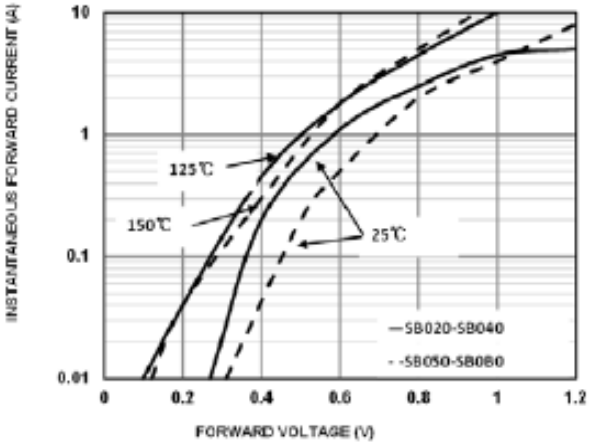


FIG5-Typ REVERSE CHARACTERISTICS

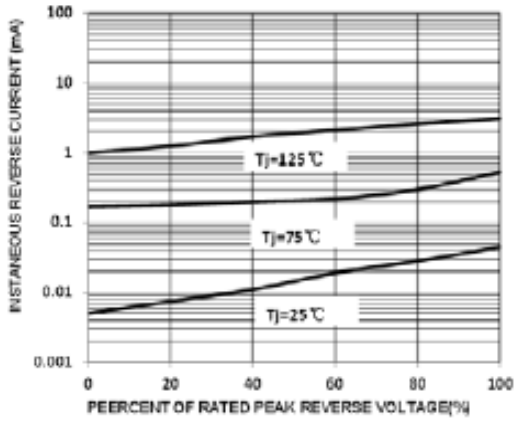
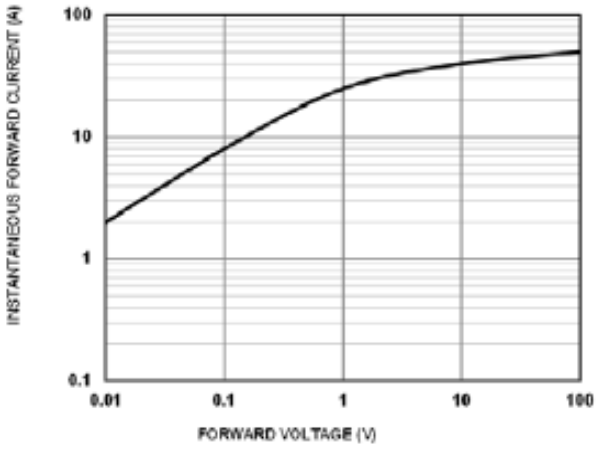


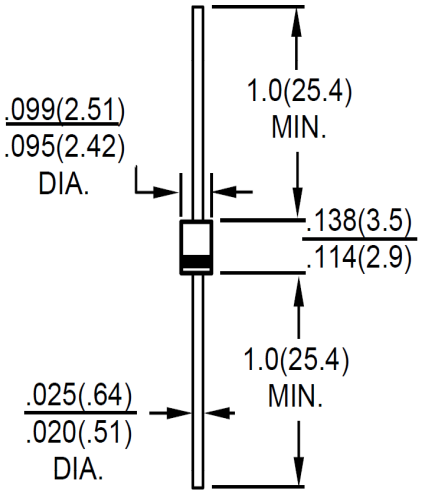
FIG.6-Transient Thermal mpegance



Package Outline Dimensions

in inches (millimeters)

R-1



Dimensions in inches and (millimeters)

Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.11.27	Modify document format

Disclaimers

These materials are intended as a reference to assist our customers in the selection of the Suzhou Good-Ark product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Suzhou Good-Ark Electronics Co., Ltd.or a third party.

Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.

All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Suzhou Good-Ark Electronics Co., Ltd. without notice due to product improvements or other reasons. It is therefore recommended that customers contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized Suzhou Good-Ark Electronics Co., Ltd. for the latest product information before purchasing a product listed herein. The information described here may contain technical inaccuracies or typographical errors. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability, or other loss rising from these inaccuracies or errors. Please also pay attention to information published by Suzhou Good-Ark Electronics Co., Ltd. by various means, including our website home page.
(http://www.goodark.com)

When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, Please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability or other loss resulting from the information contained herein.

The prior written approval of Suzhou Good-Ark Electronics Co., Ltd. is necessary to reprint or reproduce in whole or in part these materials.

Please contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized distributor for further details on these materials or the products contained herein.