

3A,70-100V 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°C/10 seconds



DO-201AD

Applications

- Small battery charger, Power supplies

Maximum Ratings & Electrical Characteristics (T _A =25°C unless otherwise noted)						
Parameter	Symbol	SB370	SB380	SB390	SB3B0	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	70	80	90	100	V
Maximum RMS voltage	V _{RMS}	49	56	63	70	V
Maximum DC blocking voltage	V _{DC}	70	80	90	100	V
Maximum average forward rectified current	I _{F(AV)}	3				A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	100				A
Operating junction temperature range	T _J	-55 to +125				°C
Storage temperature range	T _{STG}	-55 to +150				°C

Thermal-Mechanical Specifications (T _A =25°C unless otherwise noted)			
Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	48	°C/W
Thermal Resistance, Junction to Case	R _{θJC}	22	°C/W
Thermal Resistance, Junction to Lead	R _{θJL}	18	°C/W

Electrical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Test Conditions	SB370	SB380	SB390	SB3B0	Unit
Forward Drop Voltage	V _F	I _F =3A T _J =25°C	0.79				V
		I _F =3A T _J =100°C	0.69				
Reverse leakage current @V _R	I _R	T _J =25°C	0.50				mA
		T _J =100°C	20				
Typical junction capacitance	C _J	4.0 V 1 MHz	250				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

($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG. 1-MAXIMUM FORWARD CURRENT DERATING CURVE

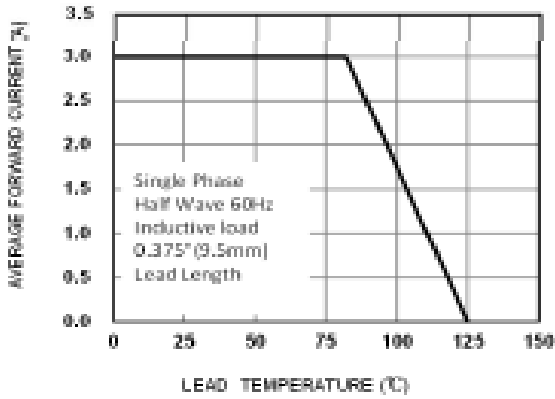


FIG. 2-MAXIMUM NON-REPETITIVE SURGE CURRENT

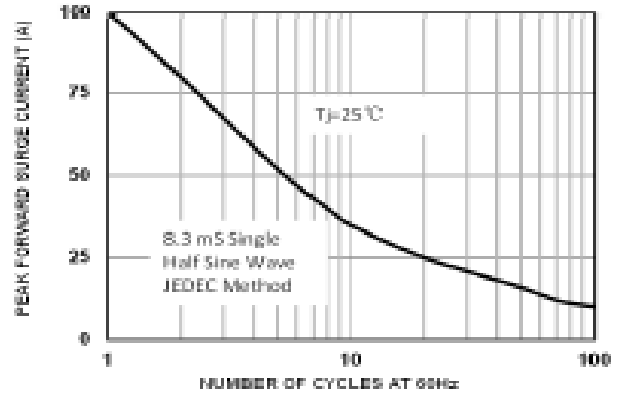


FIG. 3-TYPICAL FORWARD CHARACTERISTICS

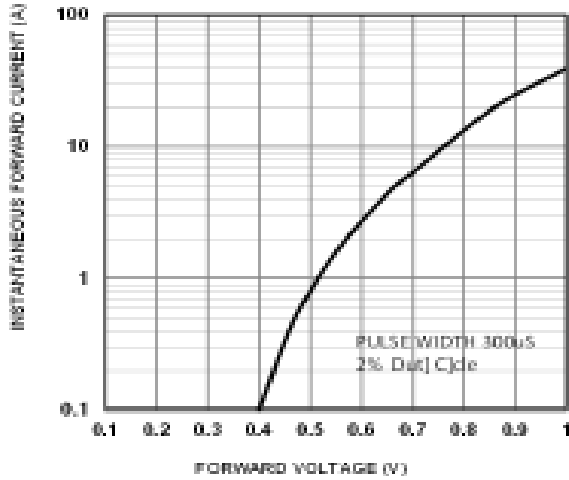


FIG. 4-TYPICAL JUNCTION CAPACITANCE

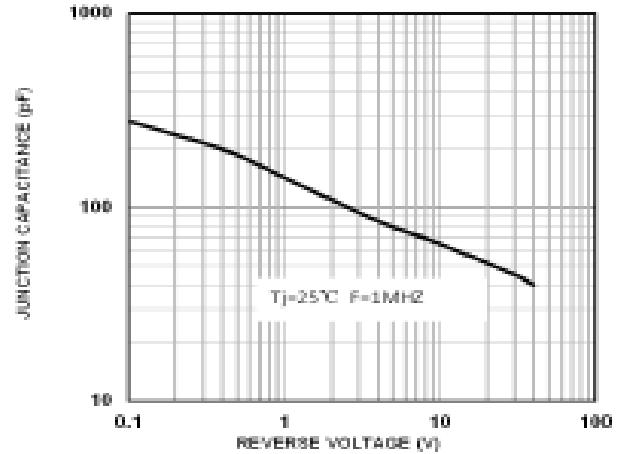
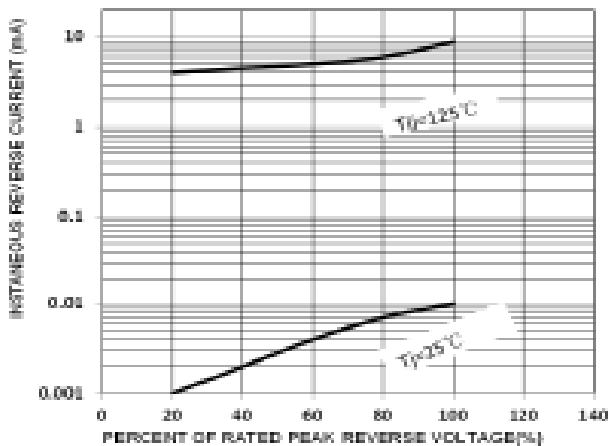


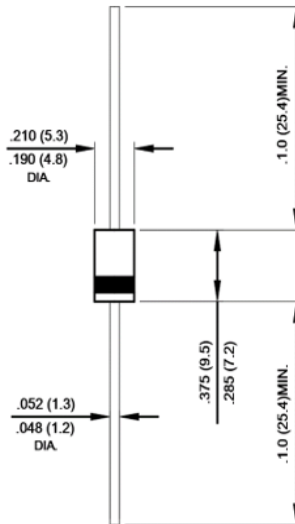
FIG. 5-TYPICAL REVERSE CHARACTERISTICS



Package Outline Dimensions

in inches (millimeters)

DO-201AD



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

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