2A,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

DO-15(DO-204AC)

Applications

- Small battery charger, Power supplies

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

Parameter	Symbol	SB220	SB230	SB240	SB250	SB260	SB270	SB280	SB290	SB2B0	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	$I_{F(AV)}$	2									A
Peak forward surge current,8.3ms single half sine-wave superimposed on rated load per diode	I_{FSM}	60									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 (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	85	°C /W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	45	°C /W
Thermal Resistance, Junction to Lead	$R_{\theta JL}$	40	°C /W

Electrical Specifications (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	SB220	SB230	SB240	SB250	SB260	SB270	SB280	SB290	SB2B0	Unit
Forward Drop Voltage	V_F	I_F=2A	0.55			0.70		0.79				V
Reverse leakage current @V_R	I_R	T_J =25℃	0.50					0.05				mA
		T_J =100℃	15					1				
Typical junction capacitance	C_J	4.0 V 1 MHZ	150									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-MAXIMUM FORWARD CURRENT DERATING CURVE

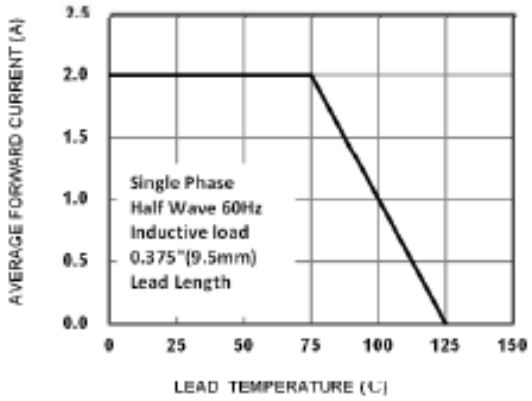


FIG.2-MAXIMUM NON-REPETITIVE SURGE CURRENT

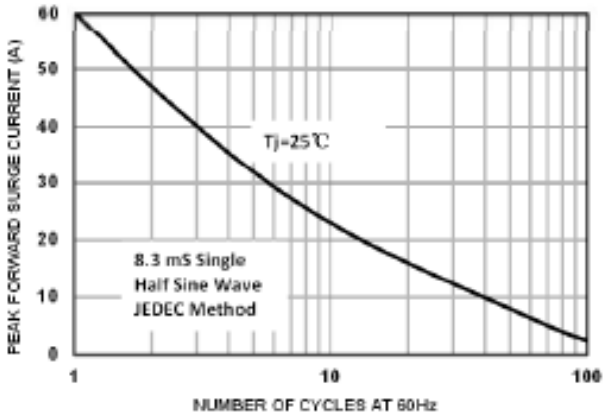


FIG.3-Typ FORWARD CHARACTERISTICS

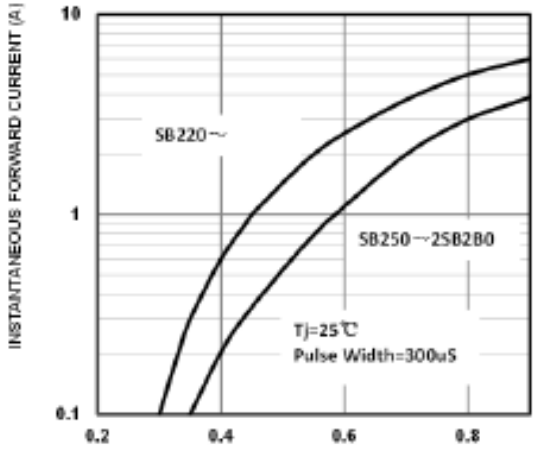
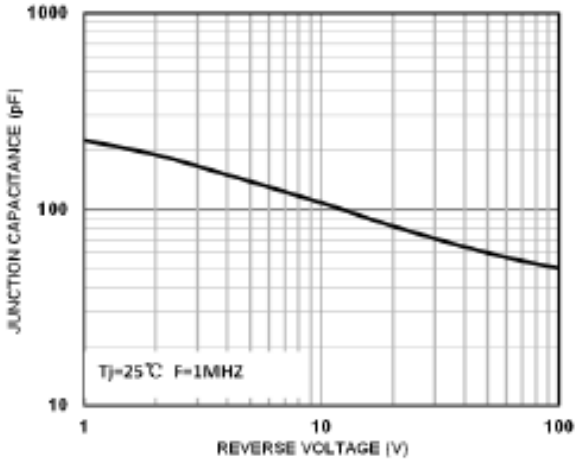
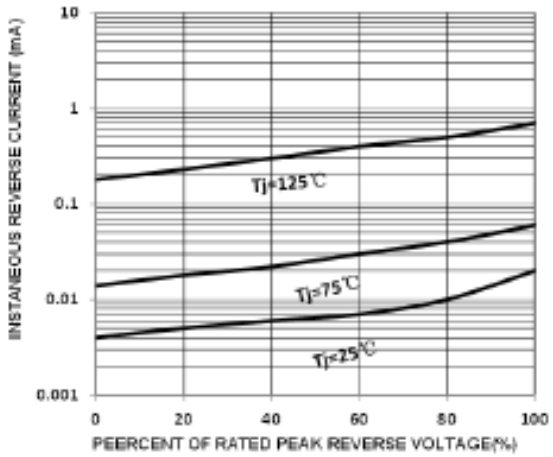


FIG.4-Typ JUNCTION CAPACITANCE

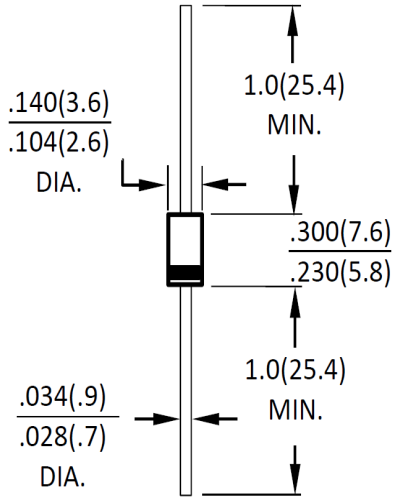




Package Outline Dimensions

in inches (millimeters)

DO-15(DO-204AC)



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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