



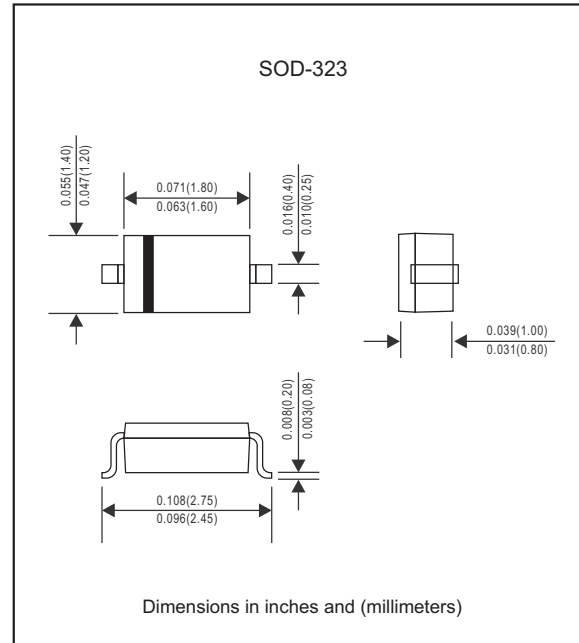
Features

- Low current rectification and high speed switching
- Extremely small surface mount type
- Low forward voltage drop
- Silicon epitaxial planar chip, metal silicon junction
- Lead-free parts meet RoHS requirements
- Halogen-free

Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-323
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

Package outline



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

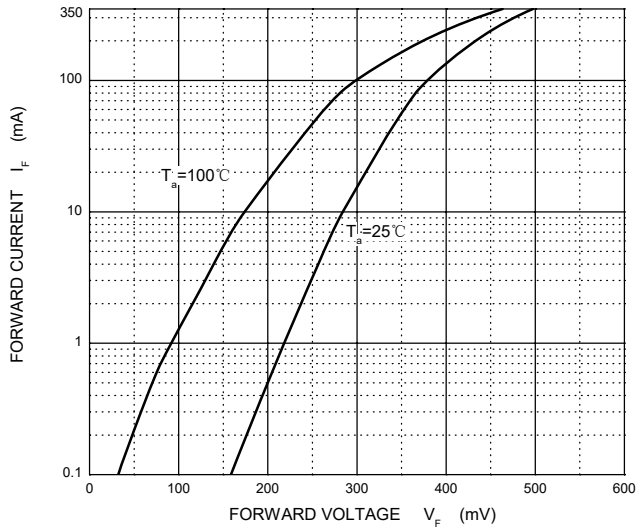
Parameter	Conditions	Symbol	BAT48JFILM	Unit
Peak repetitive reverse voltage Working peak reverse voltage DC blocking voltage		V_{RRM} V_{RWM} V_R	40	V
RMS reverse voltage		$V_{R(RMS)}$	28	V
Average rectified output current		$I_{F(AV)}$	350	mA
Non-repetitive peak forward surge current	@ $t=8.3\text{ms}$	I_{FSM}	2	A
Total device dissipation		P_D	200	mW
Thermal resistance	Junction to ambient	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Operating junction temperature range		T_J	-55 to +125	$^\circ\text{C}$
Storage temperature range		T_{STG}	-55 to +150	$^\circ\text{C}$

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

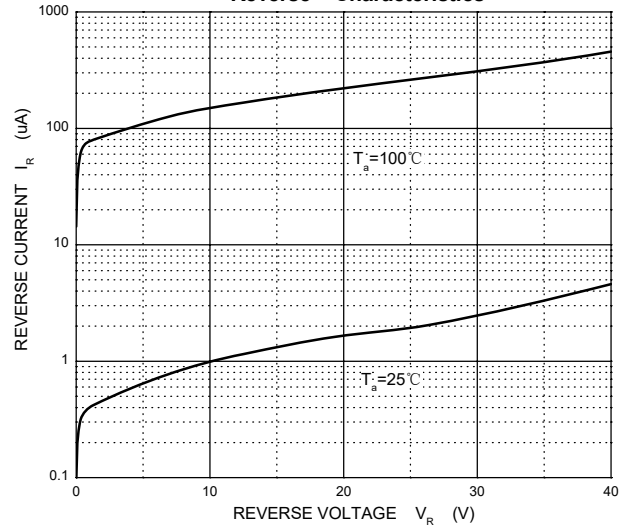
Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	Unit
Reverse breakdown voltage	$I_R=100\mu\text{A}$	$V_{(BR)R}$	40			V
Forward voltage	$I_F=20\text{mA}$ $I_F=200\text{mA}$	V_F			0.37 0.60	V
Reverse leakage current	$V_R=30\text{V}$	I_R			5.0	μA
Typical junction capacitance	$V_R=0\text{V}$, $f=1.0\text{MHz}$	C_J		50		pF
Reverse recover time	$I_F=I_R=200\text{mA}$, $I_{tr}=0.1 \times I_R$, $R_L=100\Omega$	t_{rr}		10		nS

Rating and characteristic curves

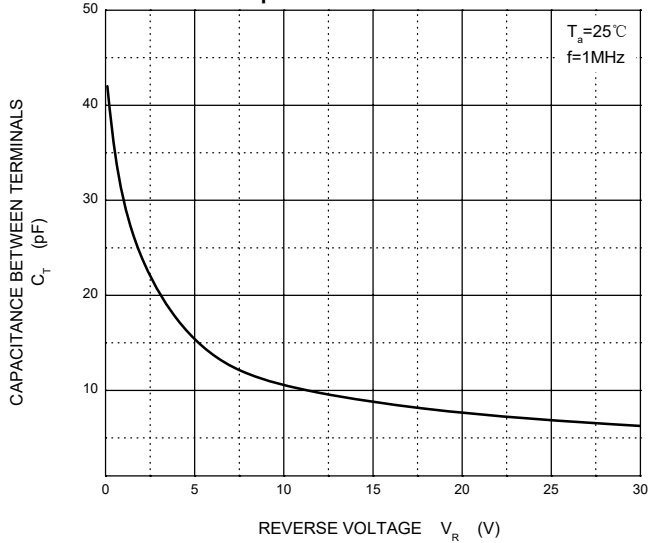
Forward Characteristics



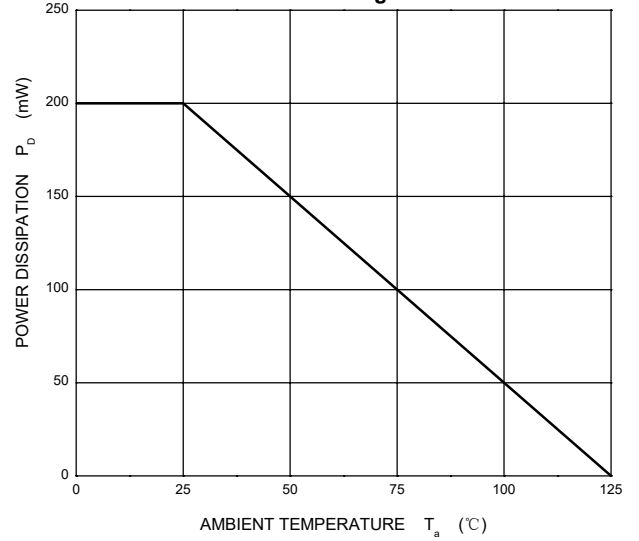
Reverse Characteristics





Capacitance Characteristics



Power Derating Curve



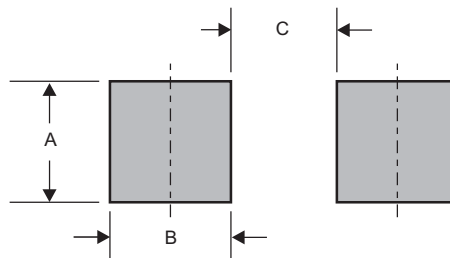
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
BAT48JFILM	S4

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-323	0.033 (0.83)	0.025 (0.63)	0.063 (1.60)

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