



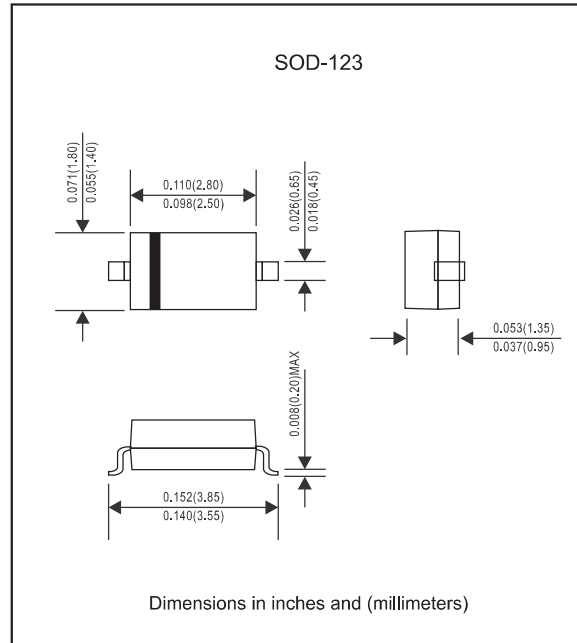
Features

- 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-123
- 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)

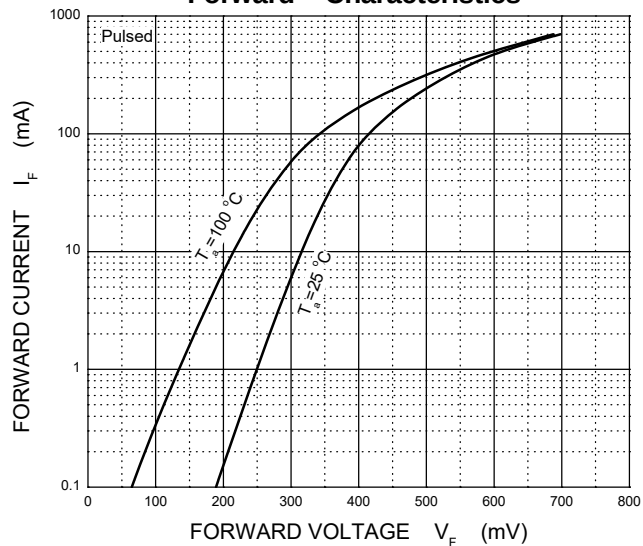
Parameter	Conditions	Symbol	BAT48ZFILM-FS	Unit
Peak repetitive reverse voltage Working peak reverse voltage DC blocking voltage		V_{RRM} V_{RWM} V_R	40	V
RMS reverse voltage		$V_{R(RMS)}$	28	V
Average rectified output current		$I_{F(AV)}$	350	mA
Non-repetitive peak forward surge current	@ $t=8.3\text{ms}$	I_{FSM}	2	A
Total device dissipation		P_D	400	mW
Thermal resistance	Junction to ambient	$R_{\theta JA}$	250	$^\circ\text{C/W}$
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)

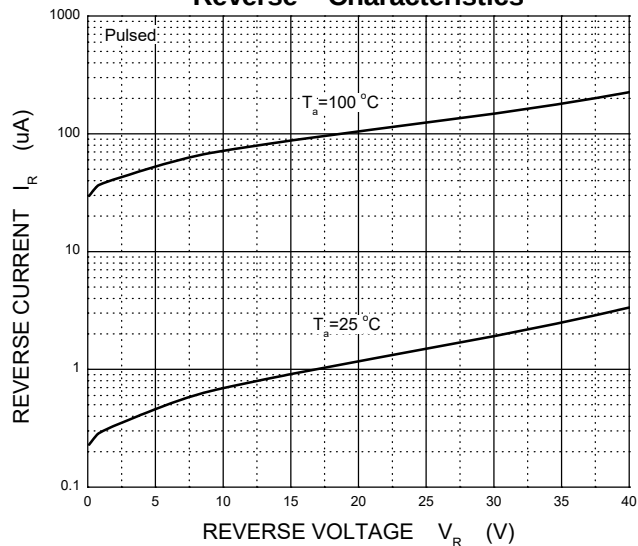
Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	Unit
Reverse breakdown voltage	$I_R=100\mu\text{A}$	$V_{(BR)R}$	40			V
Forward voltage	$I_F=20\text{mA}$ $I_F=200\text{mA}$	V_F			0.37 0.60	V
Reverse leakage current	$V_R=30\text{V}$	I_R			5.0	μA
Typical junction capacitance	$V_R=0\text{V}$, $f=1.0\text{MHz}$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

Rating and characteristic curves

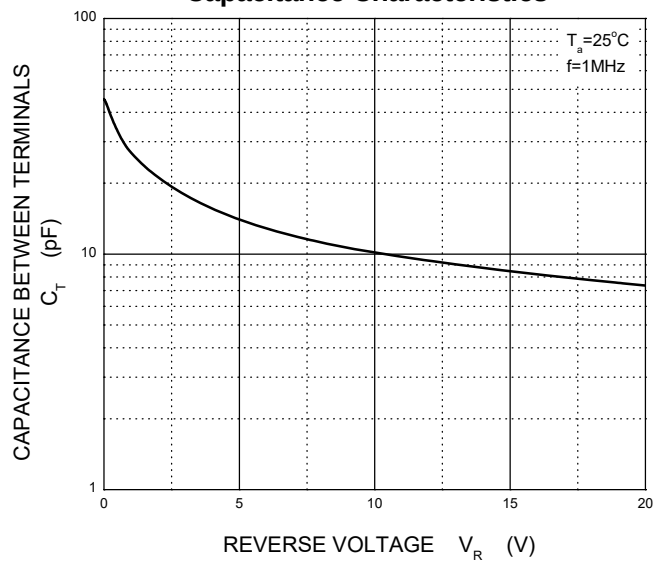
Forward Characteristics



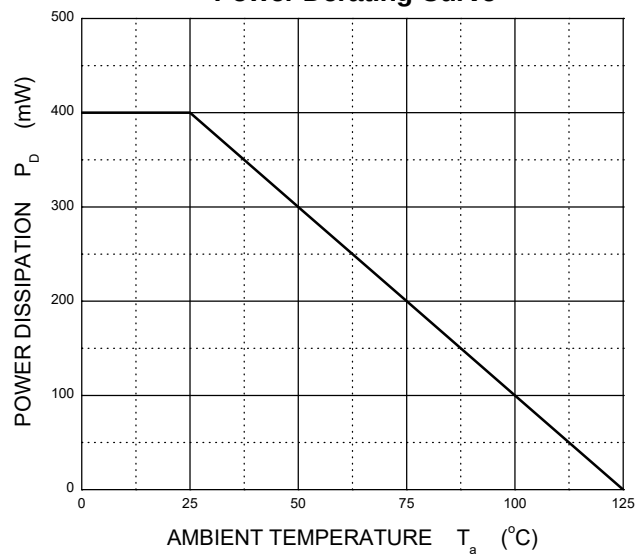
Reverse Characteristics



Capacitance Characteristics



Power Derating Curve



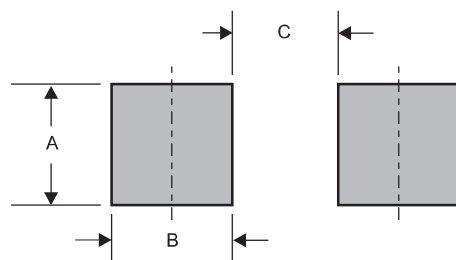
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Marking

Type number	Marking code
BAT48ZFILM-FS	S4

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123	0.048 (1.22)	0.036 (0.91)	0.093 (2.36)