



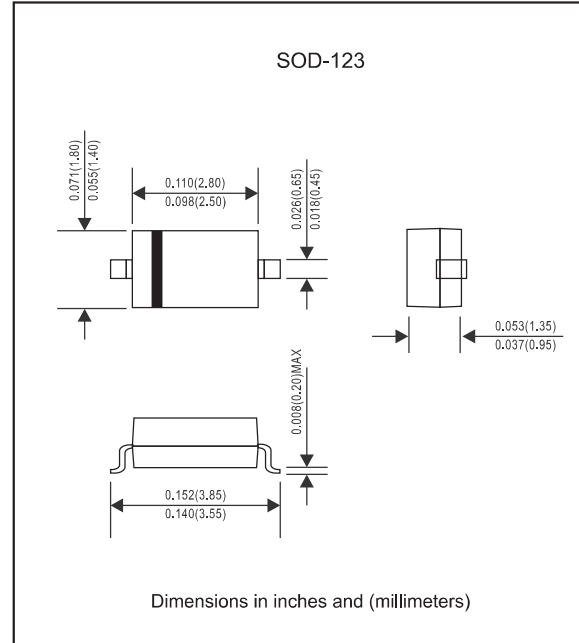
## Features

- 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



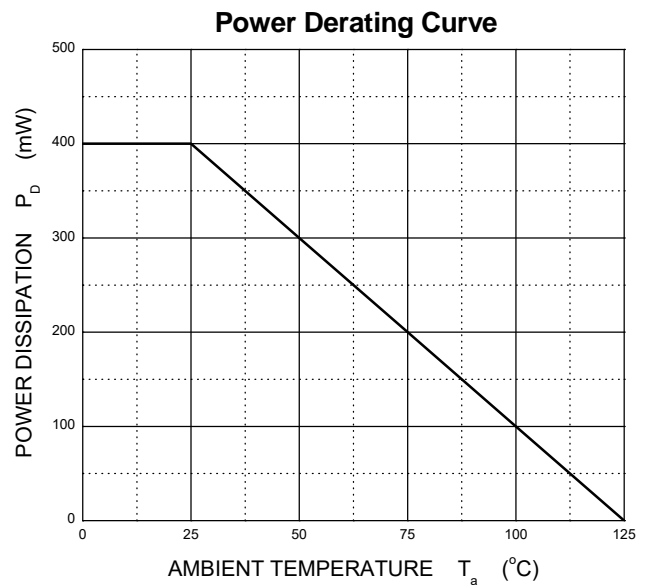
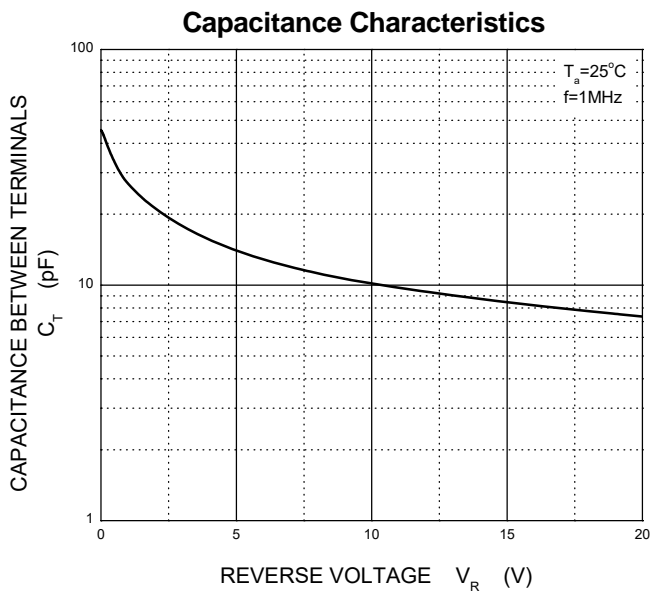
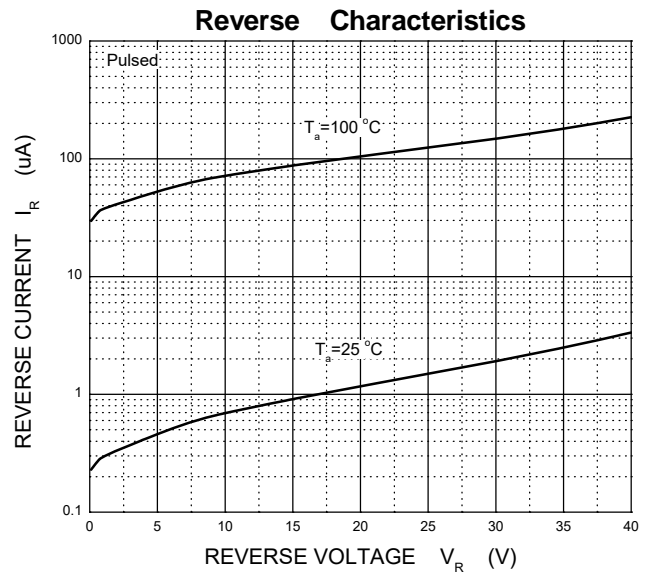
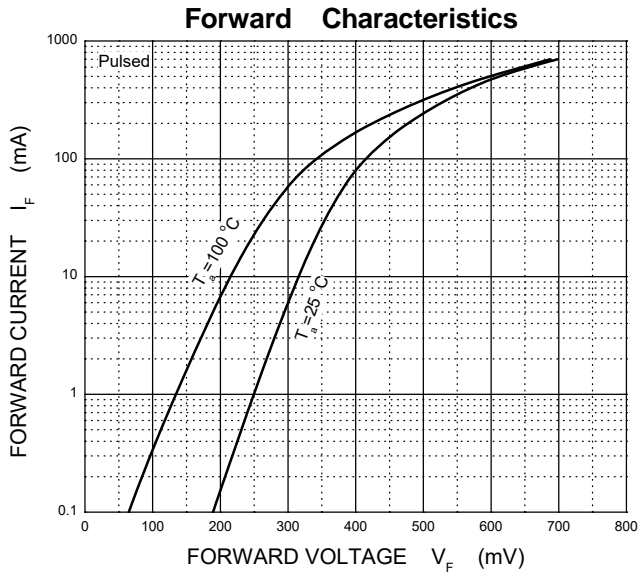
## Maximum ratings (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	BAT48ZFILM	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	$I_F=20\text{mA}$ $I_F=200\text{mA}$	VF			0.37 0.60	V
Reverse leakage current	$V_R=30\text{V}$	$I_R$			5.0	$\mu\text{A}$
Typical junction capacitance	$V_R=0\text{V}$ , $f=1.0\text{MHz}$	$C_J$		50		pF
Reverse recover time	$I_F=I_R=200\text{mA}$ , $I_{rr}=0.1 \times I_R$ , $R_L=100\Omega$	trr		10		nS

## Rating and characteristic curves



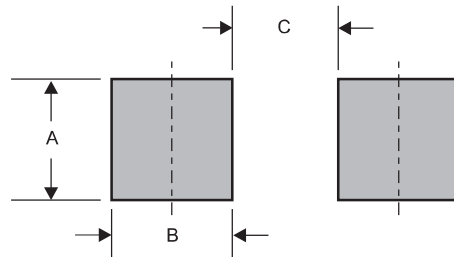
## Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

## Marking

Type number	Marking code
BAT48ZFILM	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)

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