FUXINSEMI
INNOVATOR IN SEMICONDUCTOR

BAT48JFILM

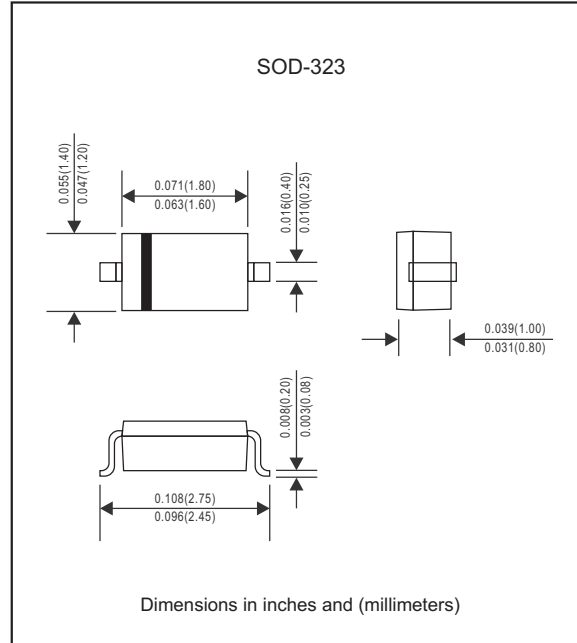## Small Signal Schottky Diode -40V

RoHS | HF | Pb | e3

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

SOD-323

0.055(1.40)
0.047(1.20)

0.071(1.80)
0.063(1.60)

0.016(0.40)
0.010(0.25)

0.039(1.00)
0.031(0.80)

0.008(0.20)
0.003(0.08)

0.108(2.75)
0.096(2.45)

Dimensions in inches and (millimeters)

Maximum ratings (AT T_A=25°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 voltaget		$V_{R(RMS)}$	28	V
Average rectified output current		$I_{F(AV)}$	350	mA
Non-repetitive peak forward surge current	@ t=8.3mS	I_{FSM}	2	A
Total device dissipation		P_D	200	mW
Thermal resistance	Junction to ambient	$R_{\theta JA}$	500	°C/W
Operating junction temperature range		T_J	-55 to +125	°C
Storage temperature range		T_{STG}	-55 to +150	°C

Electrical characteristics (AT T_A=25°C unless otherwise noted)

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

Rating and characteristic curves

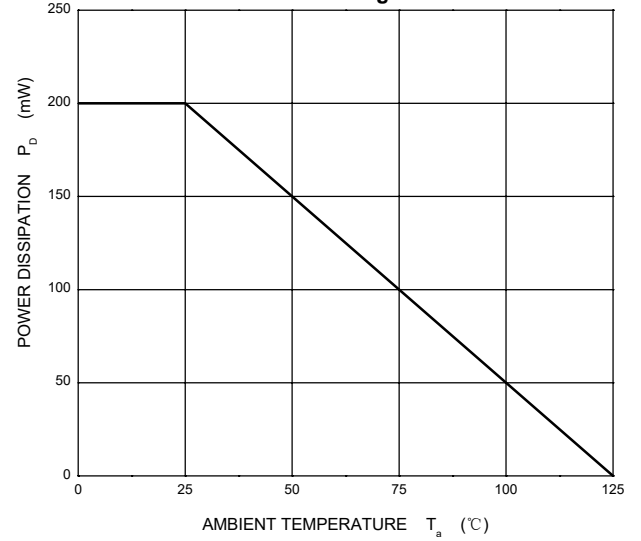**Forward Characteristics**
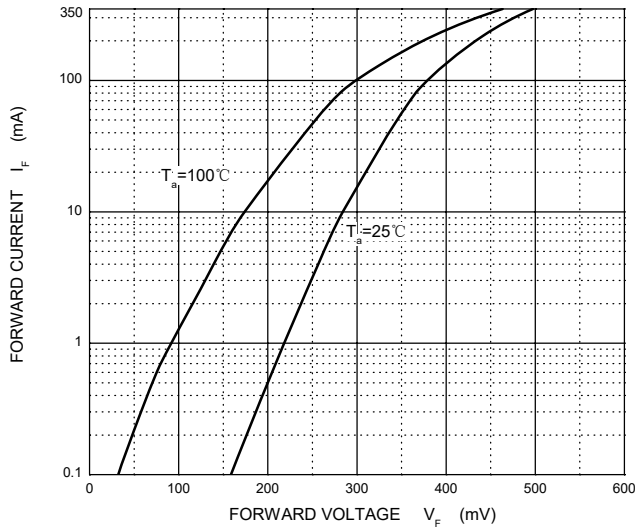
Reverse Characteristics
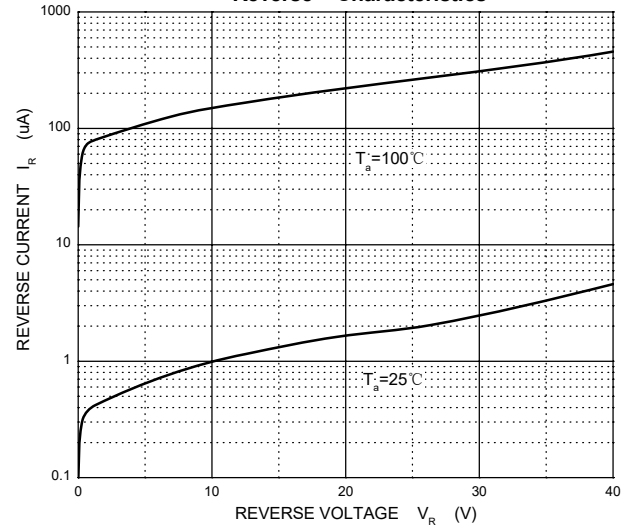
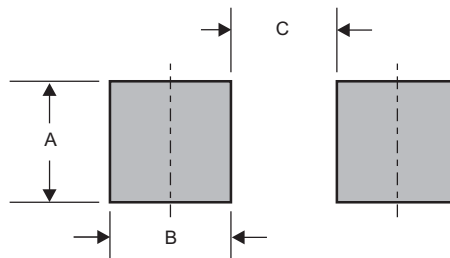**Capacitance Characteristics**
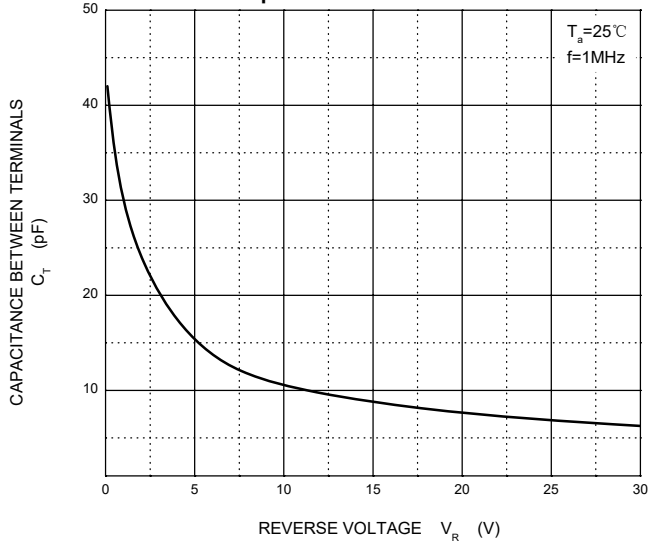
Power Derating Curve

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)