SCHOTTKY BARRIER RECTIFIERS

FEATURES

- High breakdown voltage
- Low turn-on voltage
- Guard ring construction for transient protection

MECHANICAL DATA

▪Case: SOD-323FL
▪Terminals: Solderable per MIL-STD-750, Method 2026
▪Approx. Weight: 4.5mg / 0.00016oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

Top View
Marking Code: S9
Simplified outline SOD-323FL and symbol

Maximum Ratings at 25 °C

Parameter	Symbols	BAT46WFL	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Working peak reverse voltage	V_{RWM}	100	V
Continuous Forward Current	I_F	150	mA
Repetitive peak forward current (Note 1) @ tp < 1.0s, Duty Cycle < 50%	I_{FRM}	350	mA
Non-reptitive Peak Forward Surge Current at 8.3ms	I_{FSM}	25	A
Power Dissipation	P_D	200	mW
Thermal resistance junction to ambient air	R_{thJA}	500	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +125	°C

ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

Parameter		Symbols	BAT46WFL	Units
Reverse BreakdownVoltage at I_R=100μA(NOTE 2)		$V_{(BR)R}$	100	V
Maximum Forward Voltage (NOTE 2)	I_F1=10 m A I_F2= 250 m A	V_F	0.45 1.0	V
Peak Reverse Current	V_{R1}=1.5V V_{R2}=10V V_{R3}=50V V_{R4}=75V	I_R	0.3 0.5 1 2	μA
Diodes Capacitance	V_R=0,f=1MHz V_R=1V,f=1MHz	C_T	20 12	pF

NOTES:
(1) Part mounted on FR-4 board with recommended pad layout.
(2) Short duration pulse test used to minimize self-heating effect.

Fig.1 Power Derating Curve

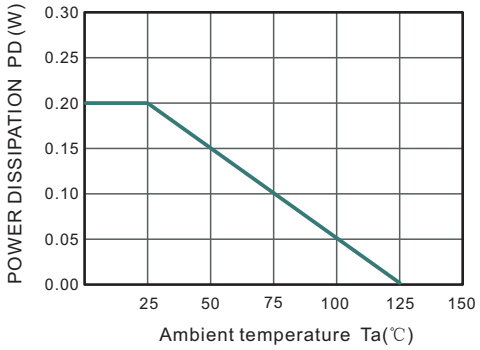


Fig.2 Typical Reverse Characteristics

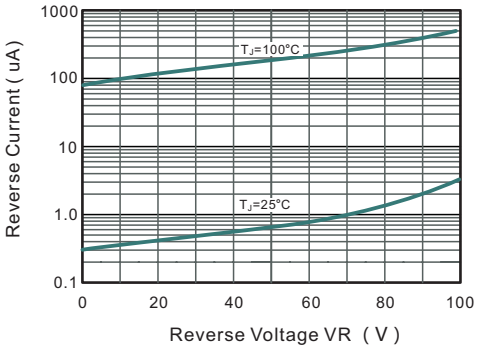


Fig.2 TYPICAL FORWARD VOLTAGE

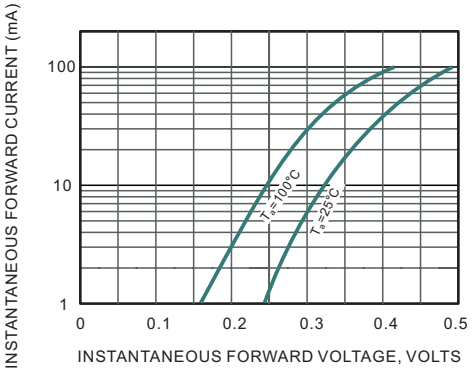


Fig.3 Typical Junction Capacitance

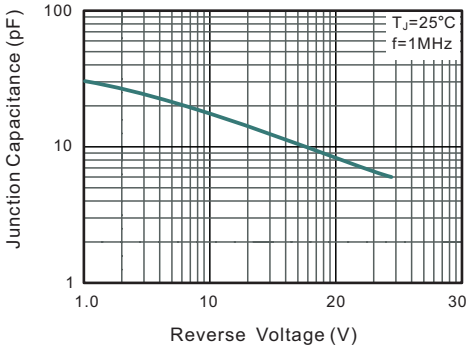


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

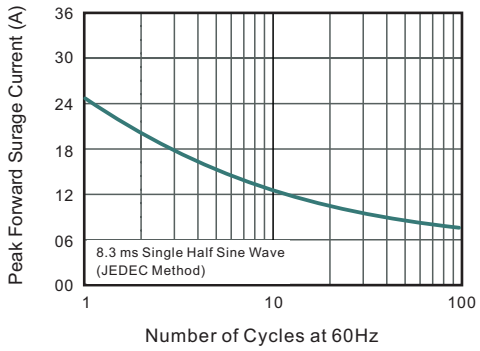
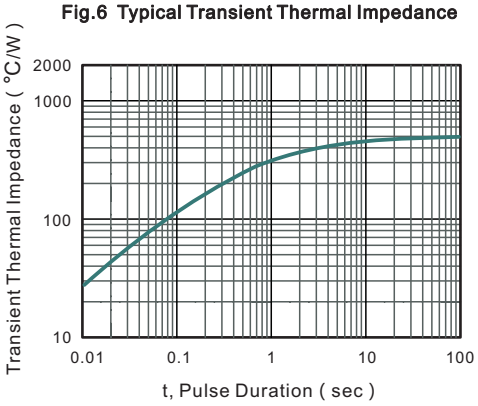
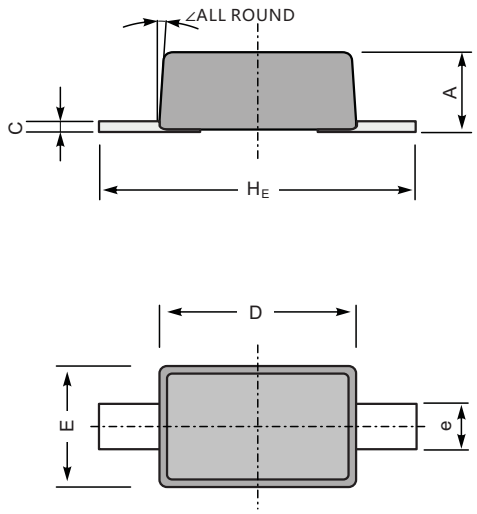


Fig.6 Typical Transient Thermal Impedance



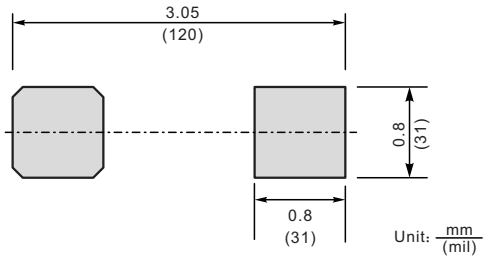
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads SOD-323FL



UNIT		A	C	D	E	e	H_E	∠
mm	max	1.0	0.25	1.8	1.35	0.4	2.7	8°
	min	0.8	0.05	1.6	1.15	0.25	2.3	
mil	max	39	9.8	71	53	18	106	
	min	31	2.0	63	45	10	91	

The recommended mounting pad size



Marking

Type number	Marking code
BAT46WFL	S9