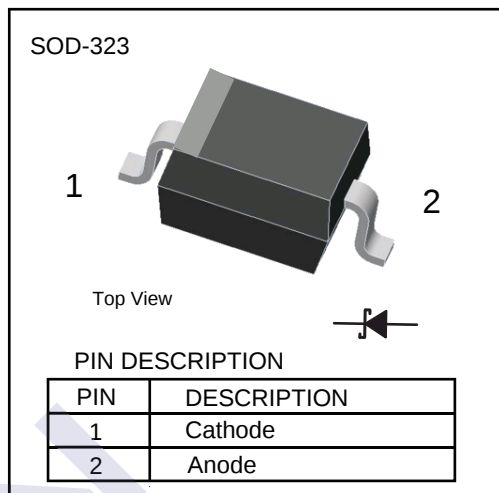


Schottky Diodes

BAT46WS (KAT46WS)

■ Features

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



■ Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Working peak reverse voltage	V_{RWM}	100	
Continuous Forward Current	I_F	150	mA
Non-repetitive Peak Forward Surge Current at 8.3ms	I_{FSM}	2.5	A
Power Dissipation	P_D	200	mW
Typical thermal resistance	$R_{\theta JA}$	500	$^\circ\text{C}/\text{W}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to 150	

Note 1. Part mounted on FR-4 board with recommended pad layout.

■ Electrical Characteristics ($T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage (Note 2)	$V_{(BR)}$	$I_R = 100\ \mu\text{A}$	100			V
Forward voltage (Note 2)	V_F	$I_F = 10\ \text{mA}$			0.45	
		$I_F = 250\ \text{mA}$			1	
Peak Reverse Current	I_R	$V_R = 1.5\ \text{V}$			0.3	μA
		$V_R = 10\ \text{V}$			0.5	
		$V_R = 50\ \text{V}$			1	
		$V_R = 75\ \text{V}$			2	
Diode capacitance	C_T	$V_R = 0\ \text{V}, f = 1\ \text{MHz}$			39	pF
		$V_R = 1\ \text{V}, f = 1\ \text{MHz}$			21	pF

Note 2. Short duration pulse test used to minimize self-heating effect.

■ Marking

Marking	S9
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Schottky Diodes

BAT46WS (KAT46WS)

■ Typical Characteristics

Fig.1 Power Derating Curve

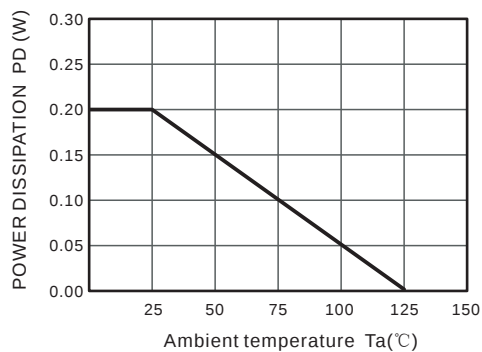


Fig.2 Typical Reverse Characteristics

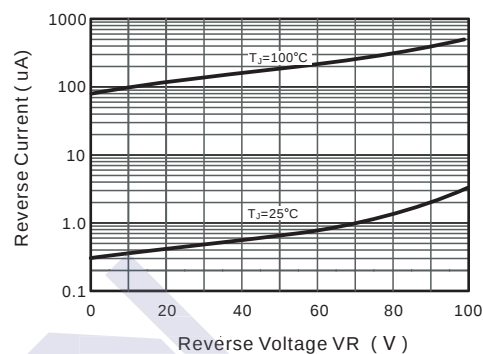


Fig.2 TYPICAL FORWARD VOLTAGE

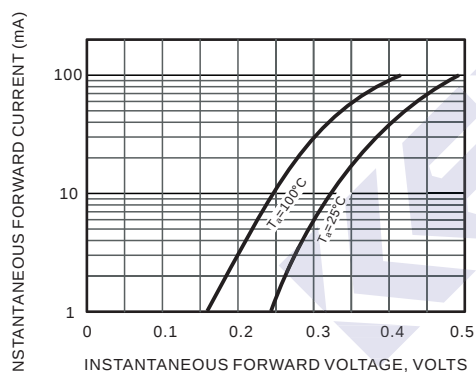


Fig.3 Typical Junction Capacitance

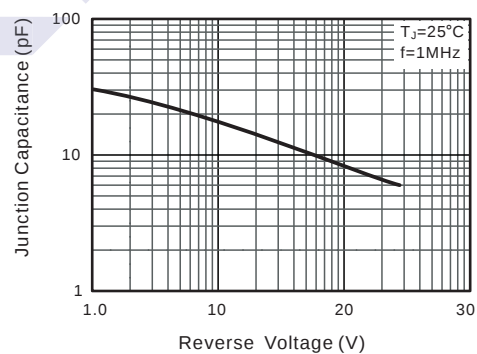


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

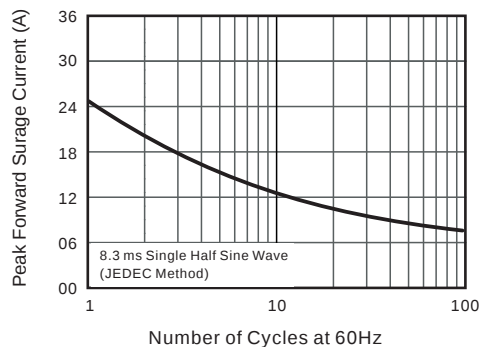
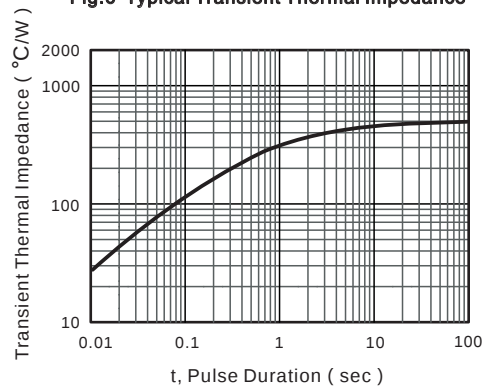


Fig.6 Typical Transient Thermal Impedance



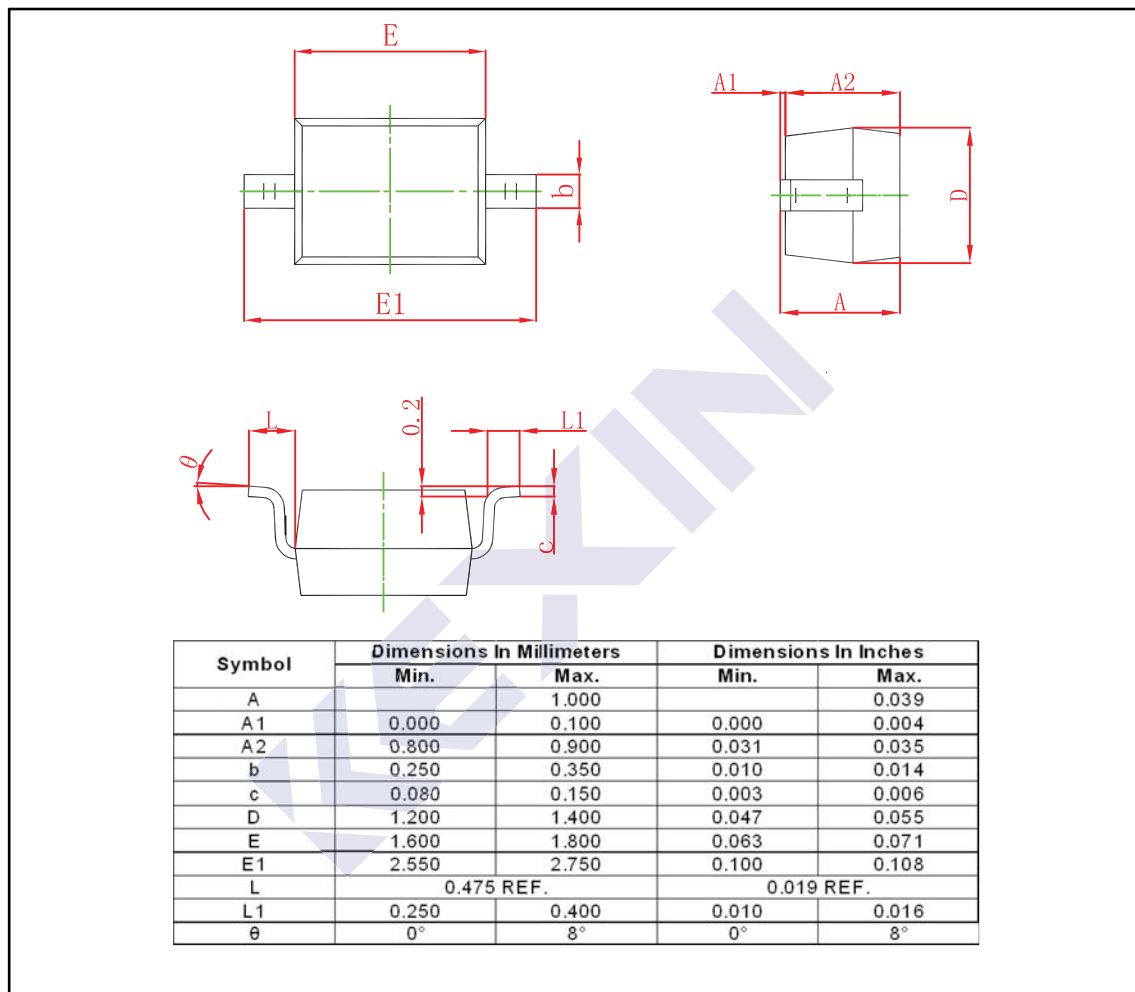
Schottky Diodes

BAT46WS (KAT46WS)

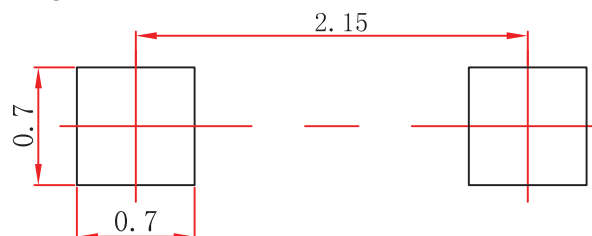
■ Package Outline Dimensions

Plastic surface mounted package; 2 leads

SOD-323



■ The Recommended Mounting Pad Size



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.