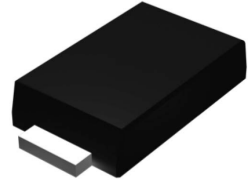


## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Very low profile - typical height of 1.0mm
- Ideal for automated placement
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU



SMAF



## Mechanical Data

- Case: SMAF molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end

## Typical Applications

For use in low voltage, high frequency inverters, DC/DC converters, free wheeling, and polarity protection applications.

## Maximum Ratings

(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	3.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method at Rated $T_L$ )	$I_{FSM}$	80	A
Typical Thermal Resistance, Junction to Ambient <sup>1</sup>	$R_{\theta JA}$	150	°C/W
Typical Thermal Resistance, Junction to Lead <sup>1</sup>	$R_{\theta JL}$	28	°C/W
Operating Junction Temperature Range	$T_J$	-55 to +150	°C
Storage Temperature Range	$T_{stg}$	-55 to +150	°C

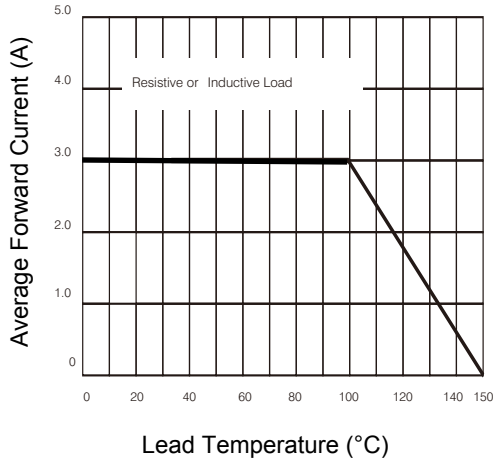
## Electrical Characteristics ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Test Conditions	Symbol	Typ.	Max.	Unit	
Instantaneous Forward Voltage <sup>2</sup>	$I_F=3.0\text{A}$	$V_F$	$T_A=25^\circ\text{C}$	0.43	0.47	V
			$T_A=100^\circ\text{C}$	0.39	-	
			$T_A=125^\circ\text{C}$	0.37	-	
Reverse Current <sup>3</sup>	$V_R=40\text{V}$	$I_R$	$T_A=25^\circ\text{C}$	60	200	$\mu\text{A}$
			$T_A=100^\circ\text{C}$	5	-	mA
			$T_A=125^\circ\text{C}$	15	-	
Typical Junction Capacitance	4V, 1MHz	$C_J$	240		pF	

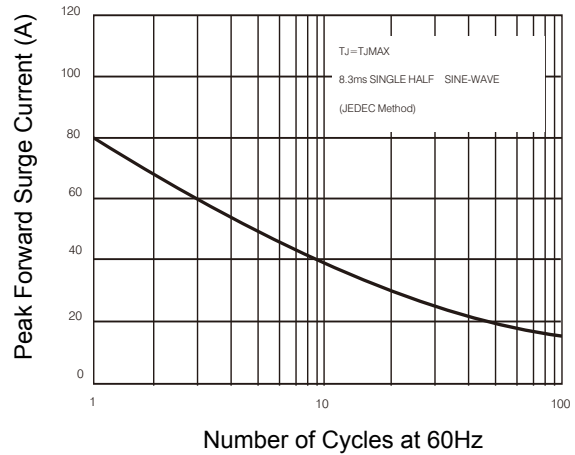
Note:

1. P.C.B. mounted with 0.118" x 0.118" (3.0mm x 3.0mm) copper pad areas ( $\geq 40\mu\text{m}$  thickness)
2. Pulse test: 300 $\mu\text{s}$  pulse width, 1% duty cycle
3. Pulse test: pulse width  $\leq 40\text{ms}$

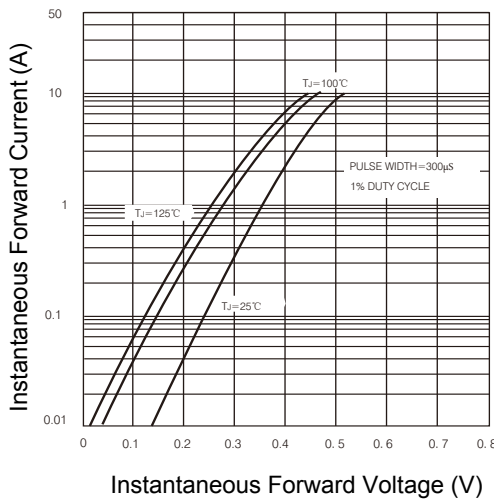
## Ratings and Characteristics Curves



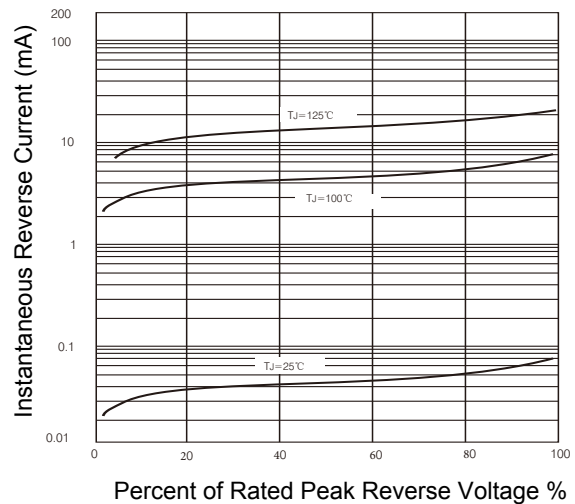
**Figure 1. Forward Current Derating Curve**



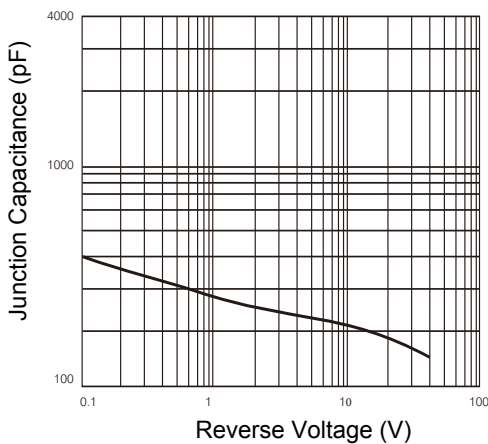
**Figure 2. Maximum Non-Repetitive Peak Forward Surge Current**



**Figure 3. Typical Instantaneous Forward Characteristics**

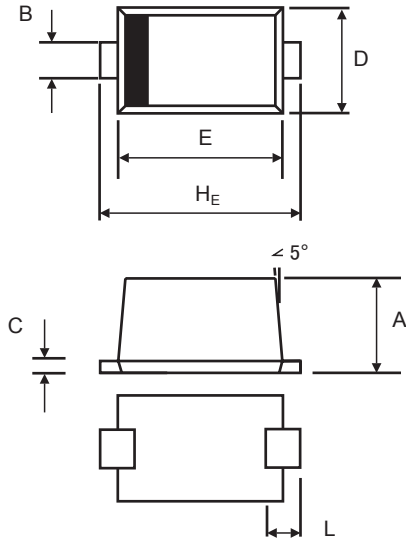


**Figure 4. Typical Reverse Characteristics**



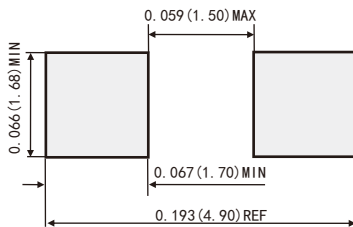
**Figure 5. Typical Junction Capacitance**

## Package Outline Dimensions (SMAF)



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	0.90	1.50	0.035	0.059
B	1.30	1.60	0.051	0.063
C	0.10	0.30	0.004	0.012
D	2.40	2.80	0.094	0.110
E	3.25	3.70	0.128	0.146
HE	4.35	4.90	0.171	0.193
L	0.60	1.20	0.024	0.047

## Recommended Pad Layout



Dimensions in inches and (millimeters)

## Order Information

Device	Package	Marking	Carrier	Quantity
GSS34LS	SMAF	SS34LS	Tape & Reel	3,000pcs / Reel

For more information, please contact us at: [inquiry@goodarksemi.com](mailto:inquiry@goodarksemi.com)