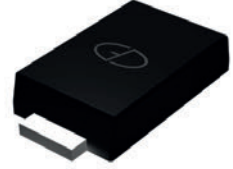


## Features

- Plastic package has underwriters laboratory flammability classification 94V-0
- Glass passivated junction
- Low forward voltage drop
- High current capability, high reliability
- Low power loss, high efficiency
- High surge current capability
- High speed switching, low leakage
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/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



## Maximum Ratings and Electrical Characteristics

(Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.)

Parameter	Symbols	Value	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	1000	V
Maximum RMS Voltage	$V_{RMS}$	700	V
Maximum DC Blocking Voltage	$V_{DC}$	1000	V
Maximum Average Forward Rectified Current	$I_{(AV)}$	2.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	50	A
Maximum Instantaneous Forward Voltage at 2.0A	$V_F$	1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	$T_J=25^{\circ}C$	5.0
		$T_J=125^{\circ}C$	100
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	75	$^{\circ}C/W$
Typical Thermal Resistance, Junction to Lead	$R_{\theta JL}$	27	$^{\circ}C/W$
Maximum Reverse Recovery Time <sup>1</sup>	$T_{rr}$	75	nS
Typical Junction Capacitance <sup>2</sup>	$C_J$	11	pF
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^{\circ}C$

Notes:

1. Test conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$ .
2. Measured at 1MHZ and applied reverse voltage of 4.0 Volts.

## Ratings and Characteristics Curves

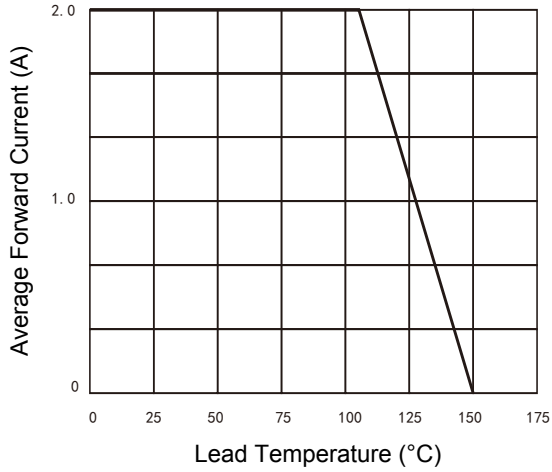


Figure 1. Typical Forward Current Derating Curve

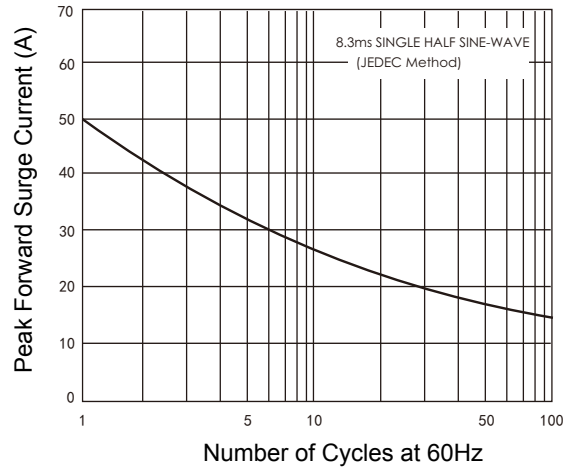


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

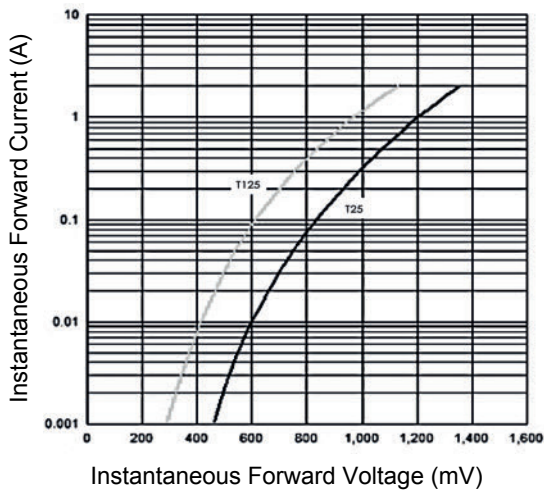


Figure 3. Typical Instantaneous Forward Characteristics

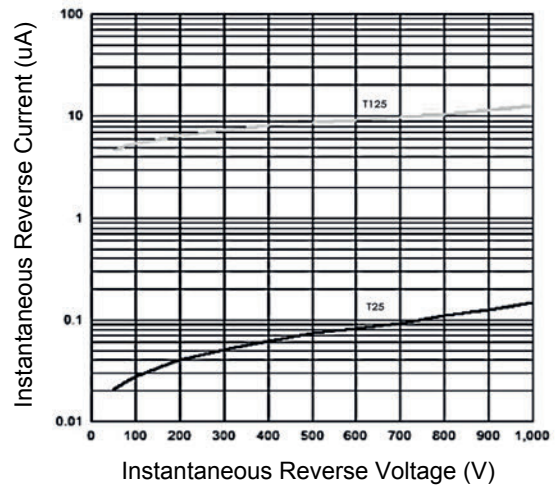


Figure 4. Typical Reverse Characteristics

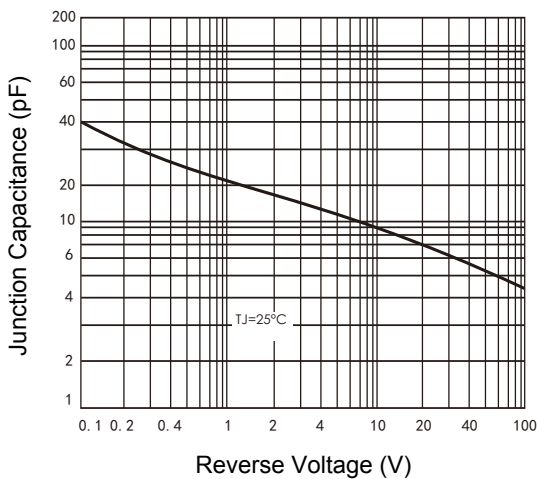
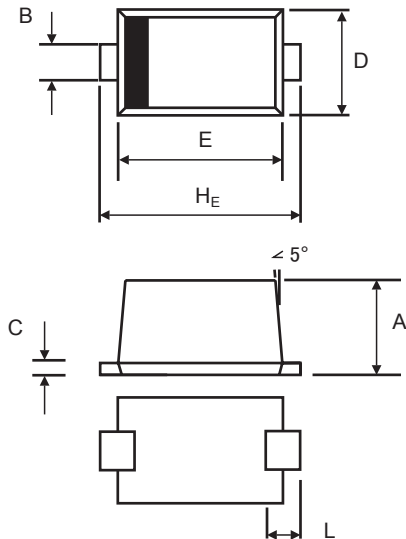


Figure 5. Typical Junction Capacitance

## 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

## Order Information

Device	Package	Marking	Carrier	Quantity
GSUS2MS	SMAF	US2MS	Tape & Reel	3,000pcs / Reel