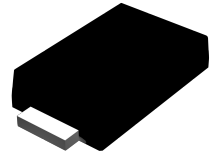


## Features

- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Low profile, typical thickness 1.0mm
- Solder dip 260 °C, 10 s



Package: eSMB(SMAF)

## Applications

For uses in low voltage, high frequency inverters, free wheeling and polarity protection applications.

## Maximum Ratings (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	LS54	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	40	V
Maximum RMS Voltage	V <sub>RMS</sub>	28	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	40	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	5.0	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I <sub>FSM</sub>	150	A
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

## Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	LS54	Unit
Instantaneous Forward Voltage	I <sub>F</sub> =5A, T <sub>A</sub> =25°C	V <sub>F</sub>	0.5	V
	I <sub>F</sub> =5A, T <sub>A</sub> =125°C		0.45	
Maximum DC Reverse Current @ rated DC Blocking Voltage	T <sub>A</sub> =25°C	I <sub>R</sub>	0.5	mA
	T <sub>A</sub> =125°C		20	
Typical Junction Capacitance	4.0 V, 1 MHz	C <sub>J</sub>	320	pF
Typical Thermal Resistance	Junction to Lead	R <sub>θJL</sub>	26	°C/W

Note 1) Thermal resistance mounted on PCB with 8.0x8.0mm copper pads

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

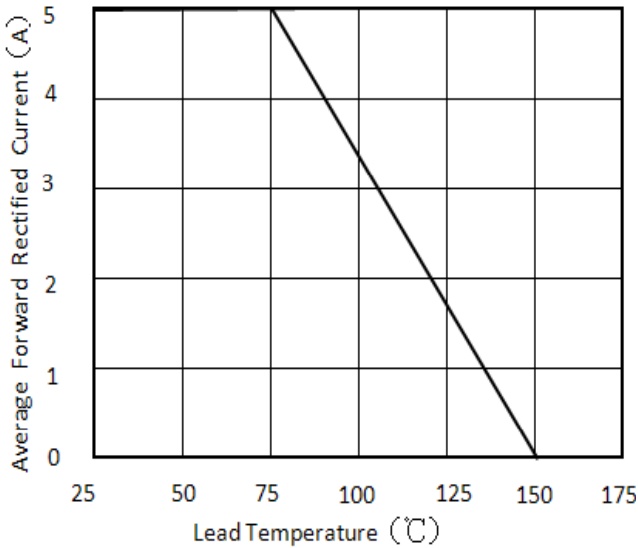


Figure 1. Forward Current Derating Curve

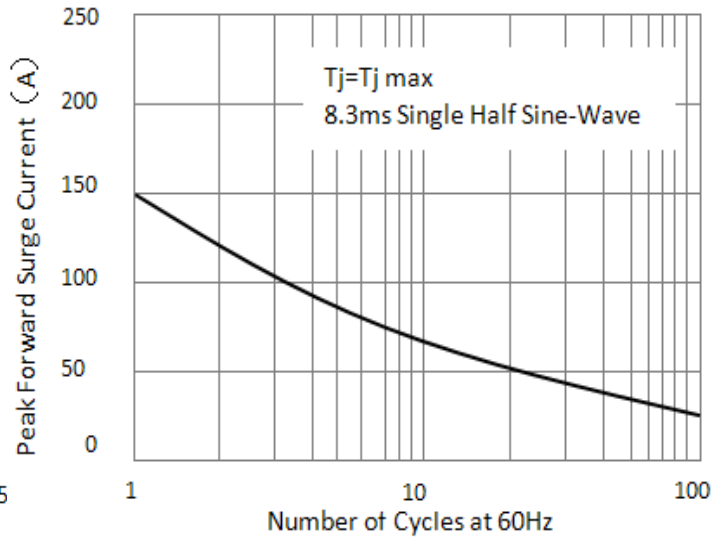


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

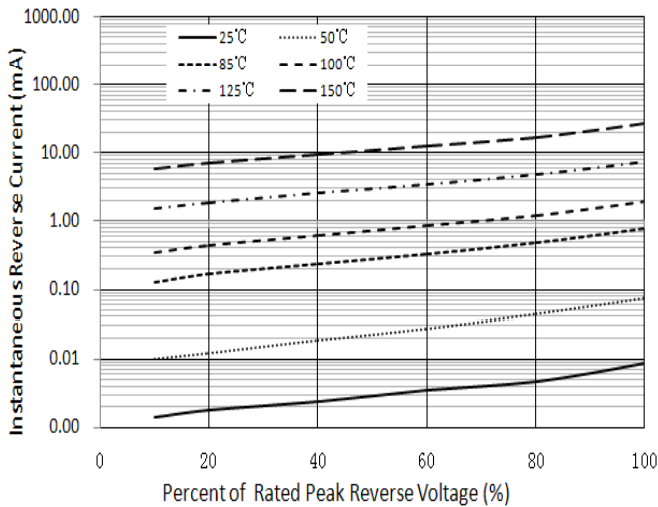


Figure 3. Typical Reverse Characteristics

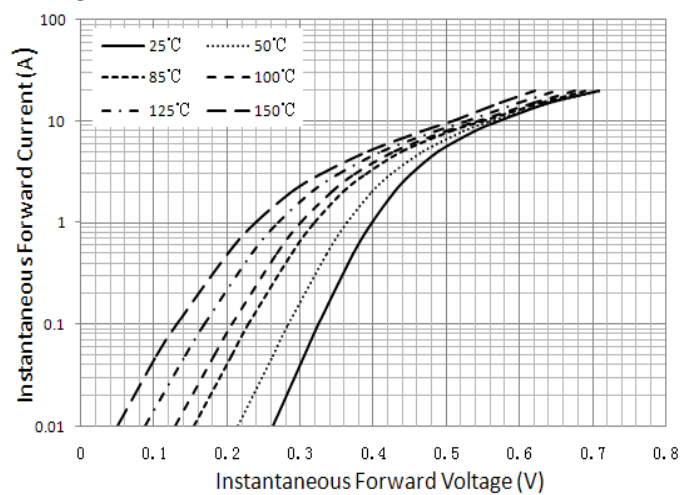
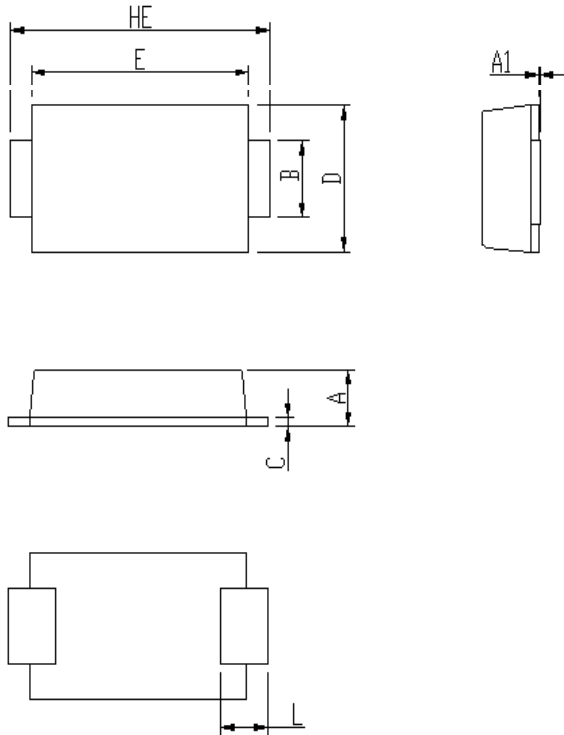


Figure 4. Typical Instantaneous Forward Characteristics

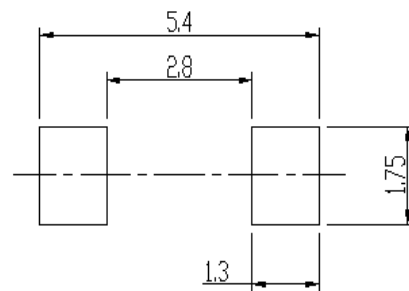
**Package Outline Dimensions**

eSGB (SMAF)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.92	1.08	0.036	0.043
A1	0	0.1	0.000	0.004
B	1.25	1.45	0.049	0.057
C	0.1	0.25	0.004	0.010
D	2.6	2.8	0.102	0.110
E	4.1	4.3	0.161	0.169
L	0.8	1.0	0.031	0.039
HE	4.8	5.2	0.189	0.205

Soldering footprint



**Packing Information**

**Packing quantities**

3000 pcs/Reel , 12mm Tape, 13" Reel

**Tape & Reel Specification**

