

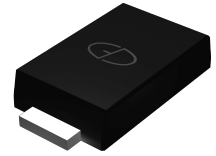


# THE DATASHEET OF LS54



**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



RoHS  
COMPLIANT

Package: eSGB(SMAF)

**Applications**

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

**Maximum Ratings** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	LS54	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Maximum RMS Voltage	$V_{RMS}$	28	V
Maximum DC Blocking Voltage	$V_{DC}$	40	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5.0	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	$I_{FSM}$	150	A
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

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

Parameter	Test Conditions	Symbol	LS54	Unit
Instantaneous Forward Voltage	$I_F=5A, T_A=25^\circ\text{C}$	$V_F$	0.5	V
	$I_F=5A, T_A=125^\circ\text{C}$		0.45	
Maximum DC Reverse Current @ rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	$I_R$	0.5	mA
	$T_A=125^\circ\text{C}$		20	
Typical Junction Capacitance	4.0 V, 1 MHz	$C_J$	320	pF
Typical Thermal Resistance	Junction to Lead	$R_{\theta JL}$	26	$^\circ\text{C/W}$

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)

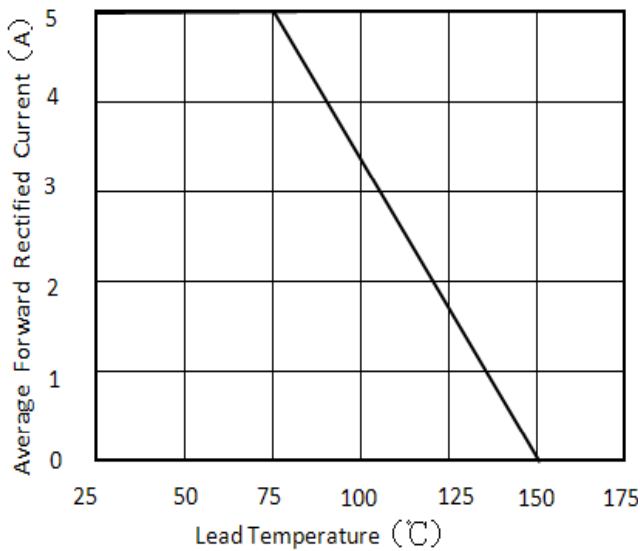


Figure 1. Forward Current Derating Curve

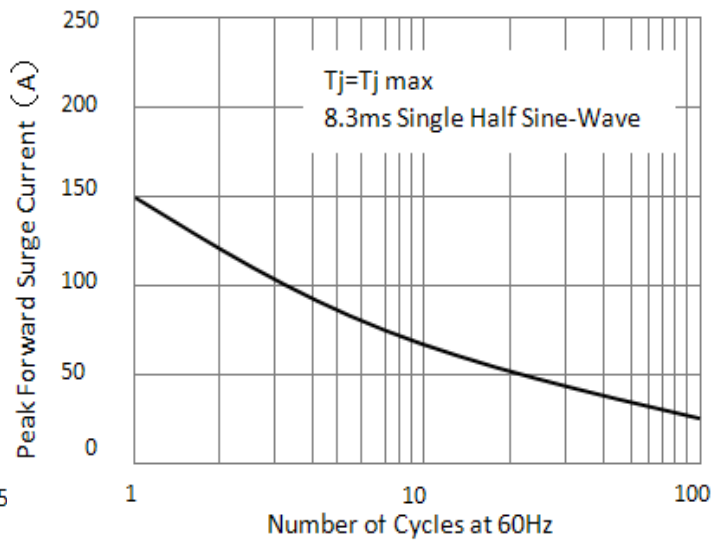


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

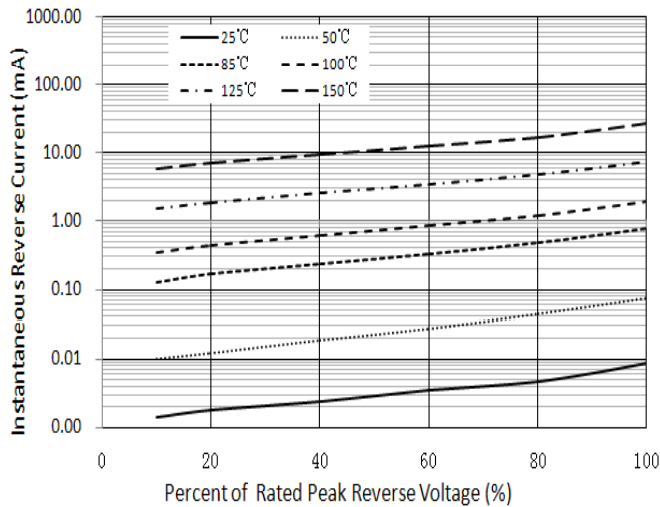


Figure 3. Typical Reverse Characteristics

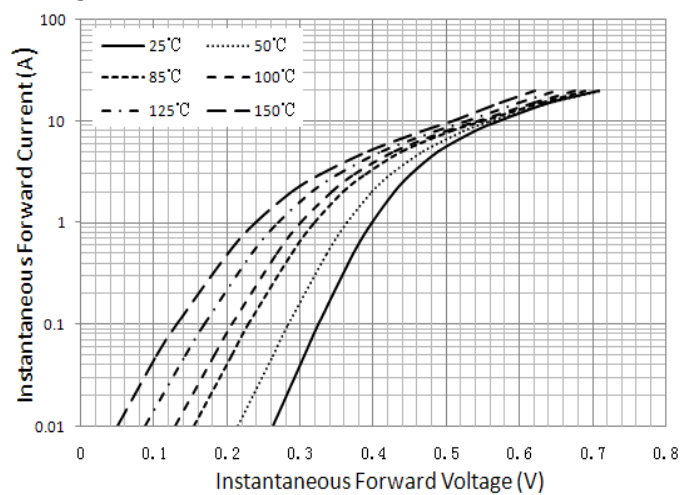
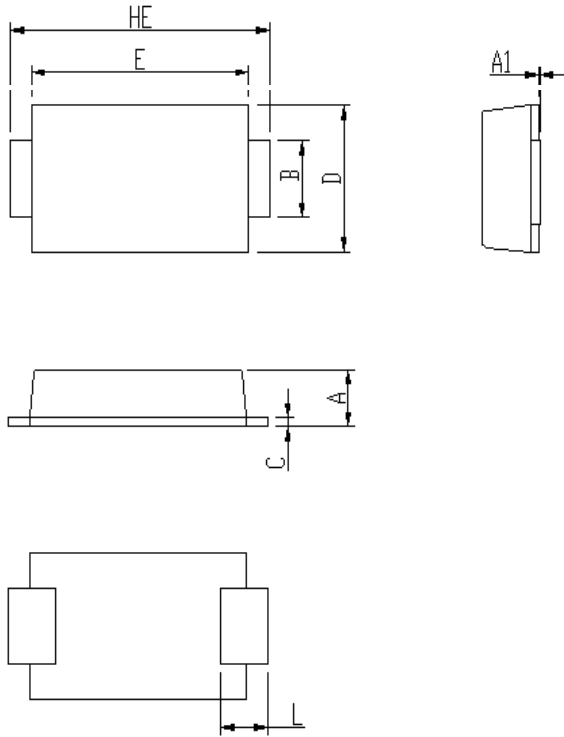


Figure 4. Typical Instantaneous Forward Characteristics

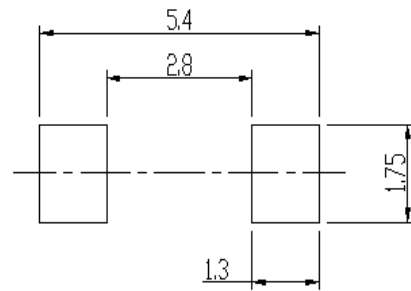
**Package Outline Dimensions**

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

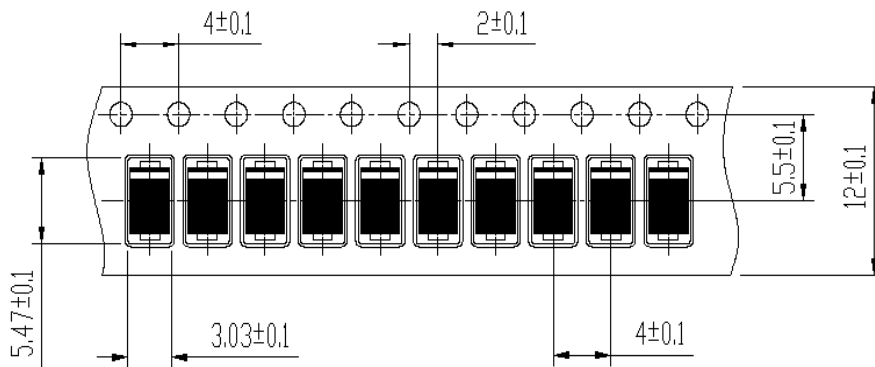


**Packing Information**

**Packing quantities**


10,000 pcs/Reel , 12mm Tape, 13"

**Reel Tape & Reel Specification**



## Looking for pricing, stock, or lifecycle information?

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