

## Features

- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Low profile, typical thickness 1.0mm
- AEC-Q101 qualified
- 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<sub>A</sub> = 25°C unless otherwise noted)

Parameter	Symbol	LSL54	LSL545	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	40	45	V
Maximum RMS Voltage	V <sub>RMS</sub>	28	31.5	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	40	45	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub> <sup>1)</sup>	5.0		A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I <sub>FSM</sub>	150		A
Rating for Fusing(t<8.3ms)	I <sup>2</sup> t	93.8		A <sup>2</sup> sec
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to +125		°C

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

Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Instantaneous Forward Voltage	I <sub>F</sub> =1A, T <sub>A</sub> =25°C	V <sub>F</sub>	-	0.35	-	V
	I <sub>F</sub> =2A, T <sub>A</sub> =25°C		-	0.38	-	
	I <sub>F</sub> =3A, T <sub>A</sub> =25°C		-	0.40	0.45	
	I <sub>F</sub> =5A, T <sub>A</sub> =25°C		-	0.44	0.50	
	I <sub>F</sub> =5A, T <sub>A</sub> =125°C		-	0.36	-	
Maximum DC Reverse Current at Rated DC Blocking Voltage	T <sub>A</sub> =25°C	I <sub>R</sub>	0.15			mA
	T <sub>A</sub> =100°C		20			
Typical Junction Capacitance	4.0 V, 1 MHz	C <sub>J</sub>	290			pF
Typical Thermal Resistance	Junction to Lead	R <sub>θJL</sub> <sup>1)</sup>	20			°C/W

Note 1) Mounted on PCB with 8.0×8.0mm copper pads, 2 OZ, FR4 PCB.

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

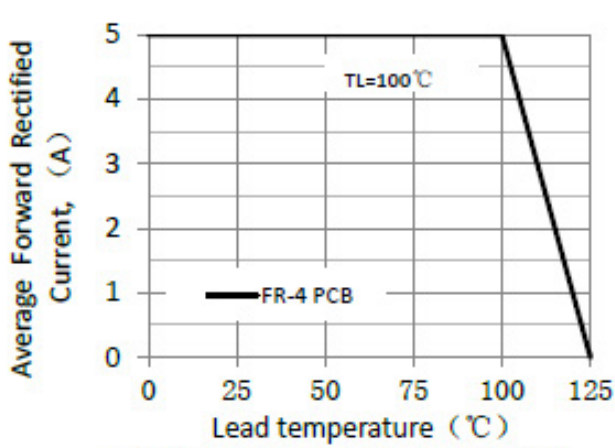


Figure 1. Forward Current Derating Curve

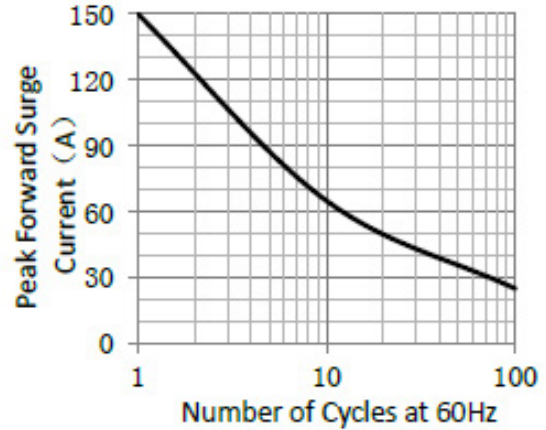


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

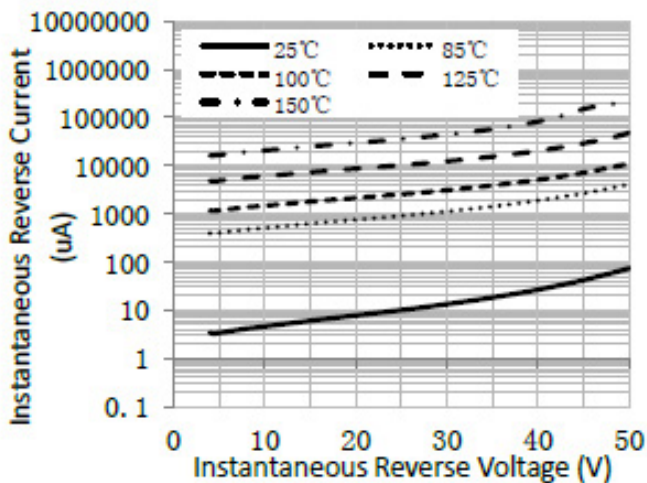


Figure 3. Typical Reverse Characteristics

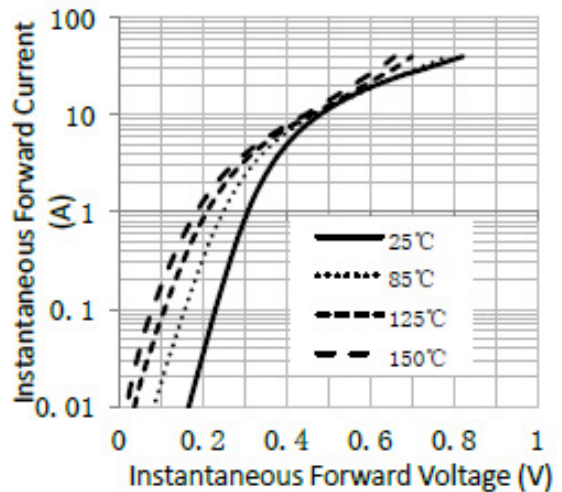


Figure 4. Typical Instantaneous Forward Characteristics

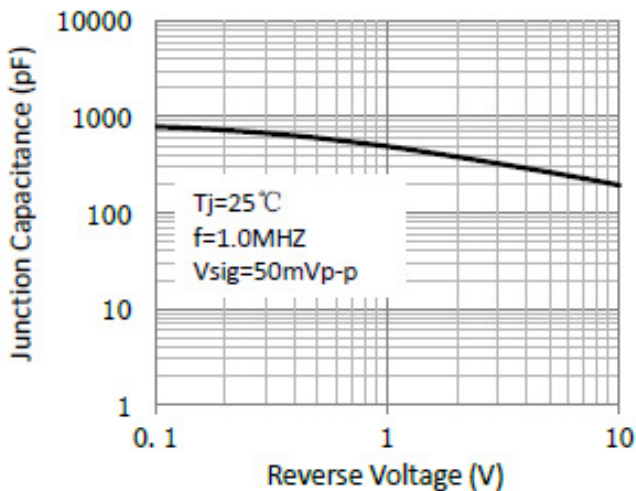
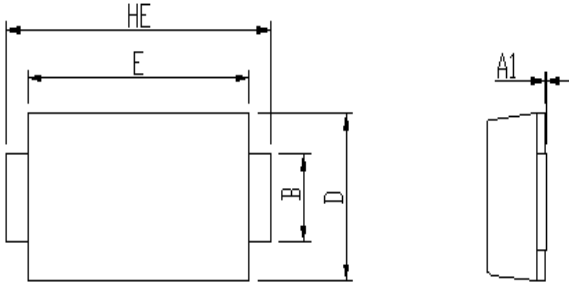


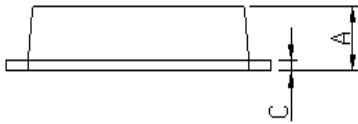
Figure 5. Typical Junction Capacitance

## Package Outline Dimensions

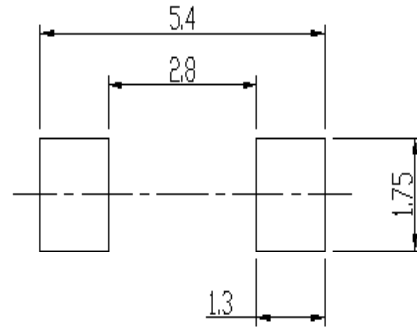
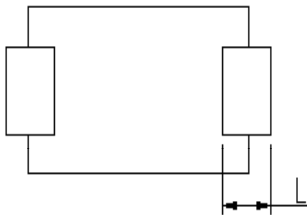
eSGB (SMAF)



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

Reel Size	Quantity/Reel	Quantity/Inner Box	Quantity/Carton
13"	10K	20K	180K

## Tape & Reel Specification

