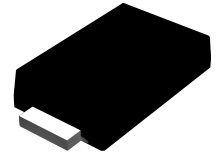


Features

- 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



Package: eSMB(SMAF)

Applications

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

Maximum Ratings (T_A = 25°C unless otherwise noted)

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

Electrical Characteristics (T_A = 25°C unless otherwise noted)

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

Note 1) Mounted on PCB with 8.0x8.0mm copper pads, 2 OZ, FR4 PCB.

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

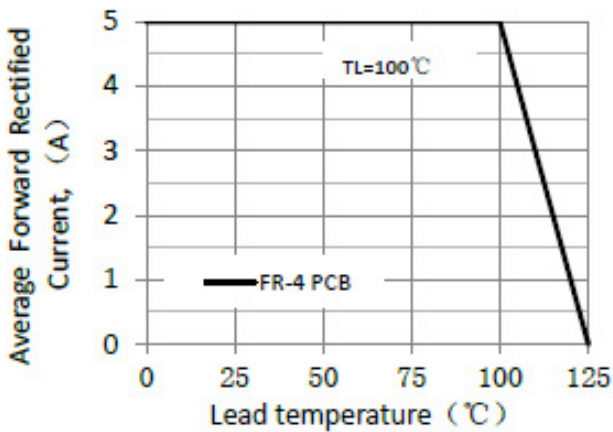


Figure 1. Forward Current Derating Curve

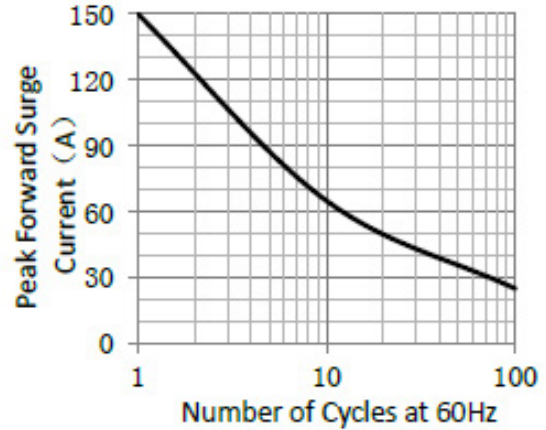


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

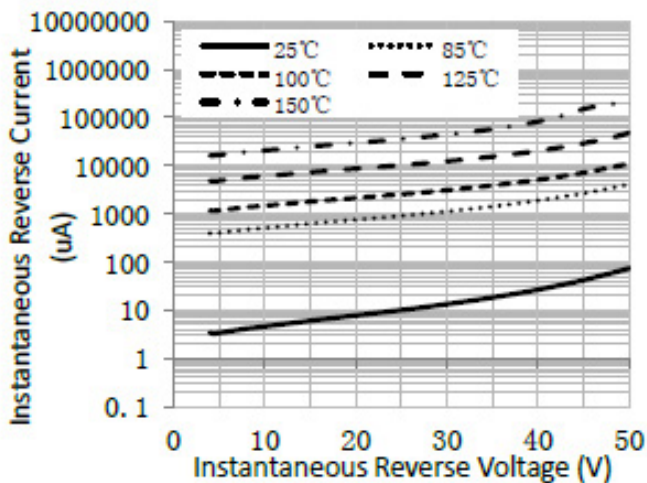


Figure 3. Typical Reverse Characteristics

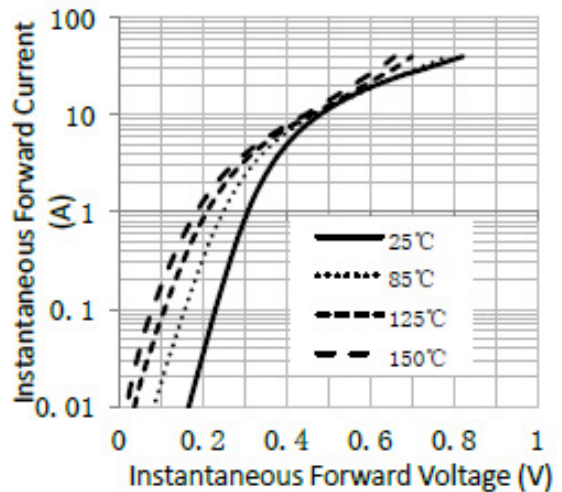


Figure 4. Typical Instantaneous Forward Characteristics

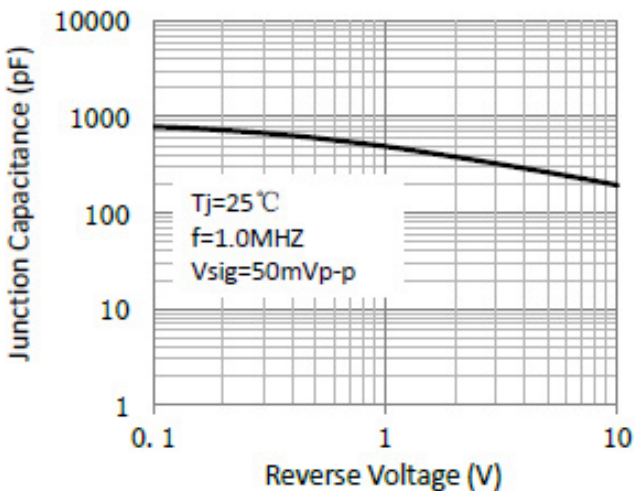
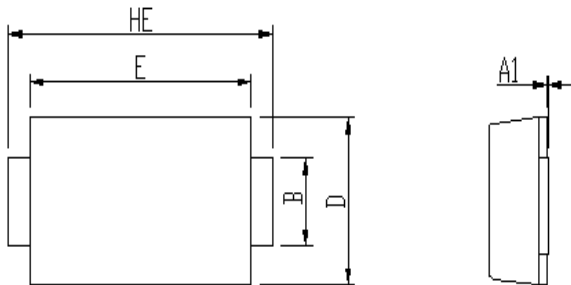


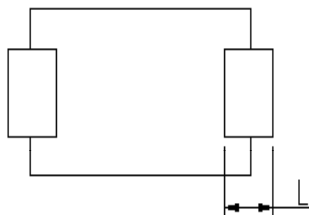
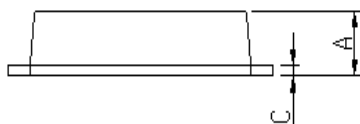
Figure 5. Typical Junction Capacitance

Package Outline Dimensions

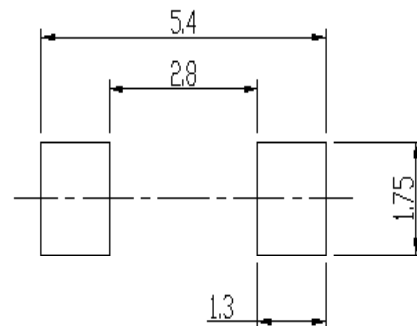
eSGB (SMAF)



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
7"	3K	21K	84K
13"	10K	20K	180K

Tape & Reel Specification

