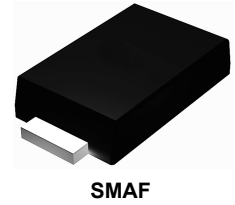


**Features**

- Low leakage current
- Schottky barrier rectifier
- Low forward voltage drop
- Moisture sensitivity: Level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds



**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	Value	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	A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	150	A
Thermal Resistance, Junction to Ambient <sup>1</sup>	$R_{\theta JA}$	85	$^{\circ}\text{C}/\text{W}$
Thermal Resistance, Junction to Case <sup>1</sup>	$R_{\theta JC}$	15	$^{\circ}\text{C}/\text{W}$
Thermal Resistance, Junction to Lead <sup>1</sup>	$R_{\theta JL}$	18	$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature Range	$T_J$	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$

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

Parameter	Symbol	Test Conditions	Value	Unit
Forward Drop Voltage	$V_F$	$I_F=5\text{A}, T_A=25^{\circ}\text{C}$	0.55	V
		$I_F=5\text{A}, T_A=125^{\circ}\text{C}$	0.45	
Reverse Leakage Current @ $V_R$	$I_R$	$T_J=25^{\circ}\text{C}$	0.3	mA
		$T_J=100^{\circ}\text{C}$	20	
Typical Junction Capacitance	$C_J$	4.0V, 1MHz	310	pF

Note:

1. Mounted on copper pad area of 0.2 x 0.2" (5.0 x 5.0mm) to each terminal.

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

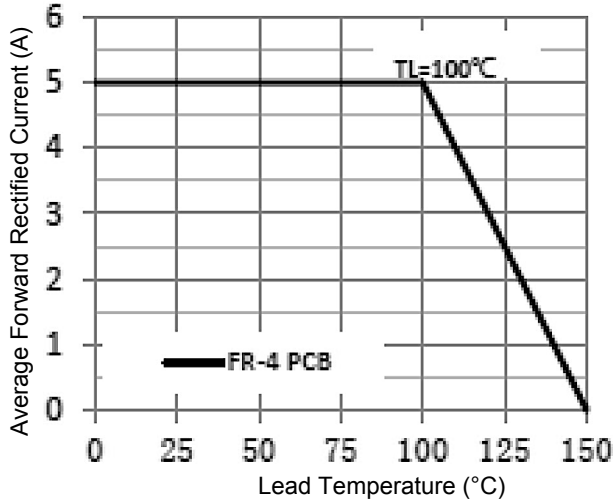


Figure 1. Forward Current Derating Curve

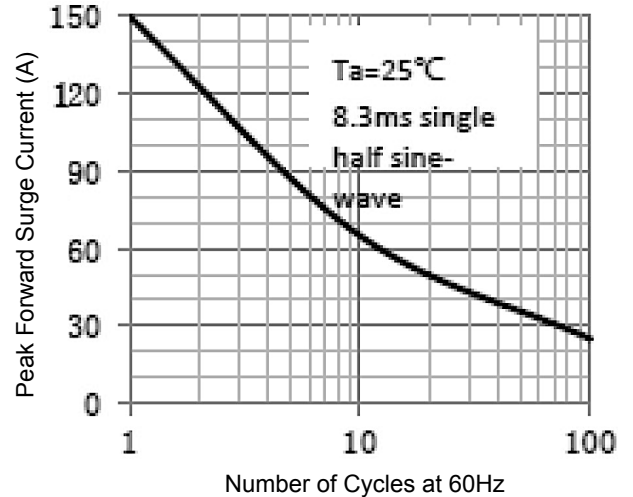


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

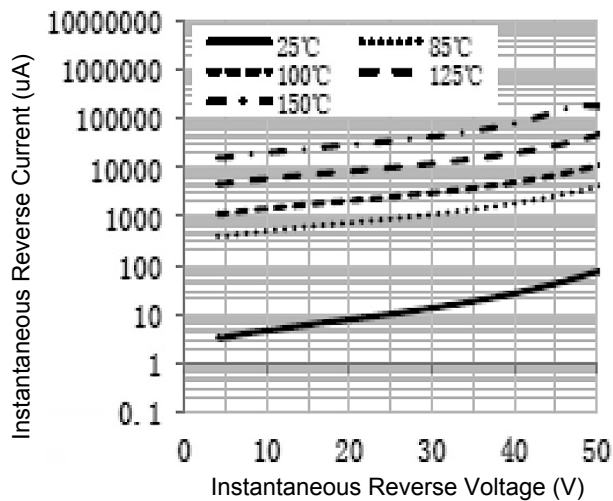


Figure 3. Typical Reverse Characteristics

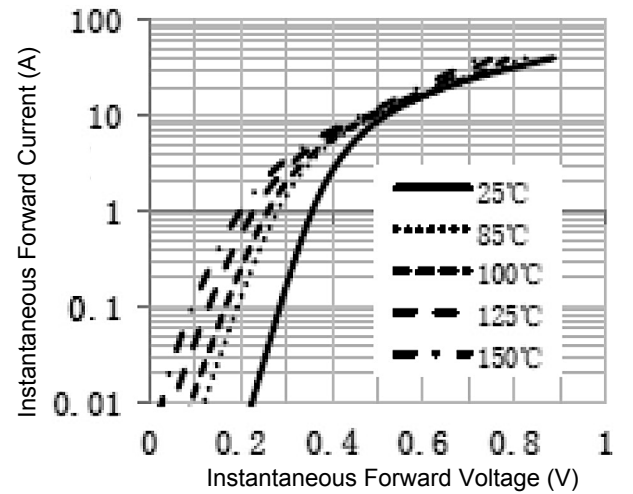


Figure 4. Typical Instantaneous Forward Characteristics

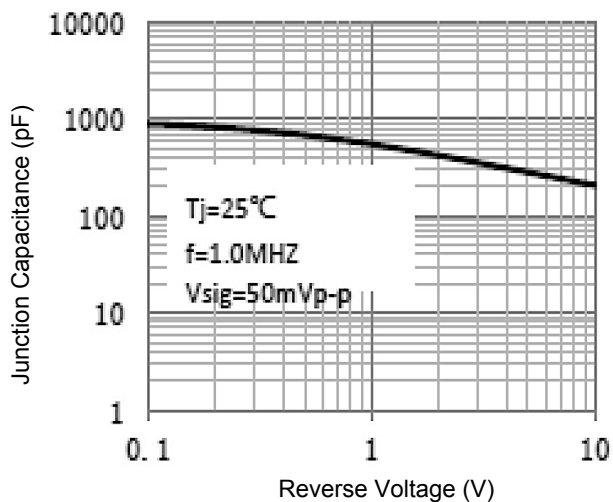
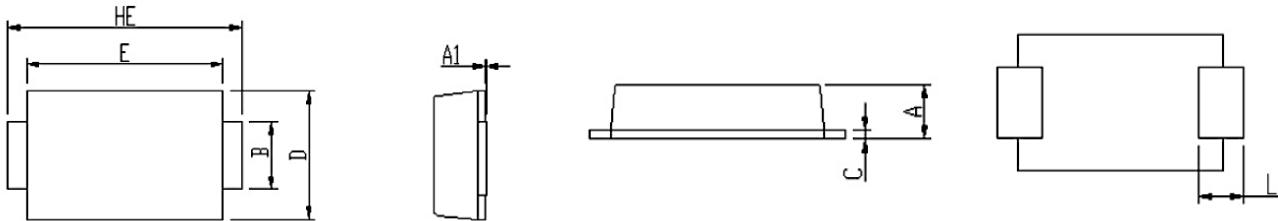


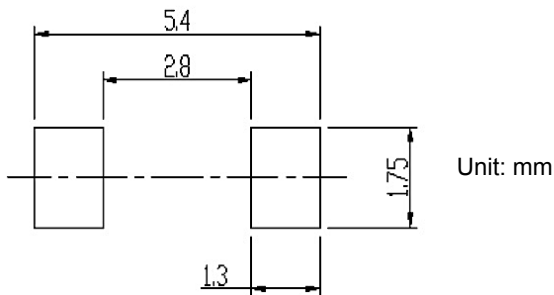
Figure 5. Typical Junction Capacitance

**Package Outline Dimensions (SMAF)**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.92	1.08	0.036	0.043
A1	0.00	0.10	0.000	0.004
B	1.25	1.45	0.049	0.057
C	0.10	0.25	0.004	0.010
D	2.60	2.80	0.102	0.110
E	4.10	4.30	0.161	0.169
L	0.70	1.10	0.028	0.043
HE	4.80	5.20	0.189	0.205

**Recommended Pad Layout**



**Order Information**

Device	Package	Marking	Carrier	Quantity
LS54	SMAF	LS54	Tape & Reel	10,000 Pcs / Reel