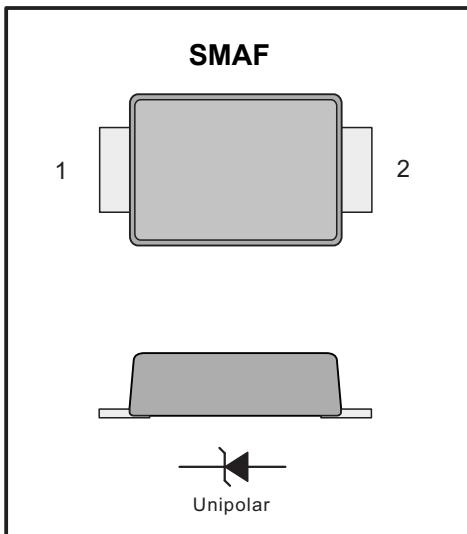


PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Features

- ◆ Metal silicon junction, majority carrier conduction
- ◆ For surface mounted applications
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- ◆ Case: SMAF
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 27mg / 0.00095oz

Absolute Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	SS52F	SS54F	SS56F	SS58F	SS510F	SS512F	SS515F	SS520F	Units			
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	80	100	120	150	200	V			
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	84	105	140	V			
Maximum DC Blocking Voltage	V_{DC}	20	40	60	80	100	120	150	200	V			
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5.0							A				
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150							A				
Max Instantaneous Forward Voltage at 5 A	V_F	0.45	0.55	0.70		0.85			V				
Maximum DC Reverse Current $T_a = 25^\circ C$ at Rated DC Reverse Voltage $T_a = 100^\circ C$	I_R	1.0 50							mA				
Typical Junction Capacitance ¹⁾	C_j	800		500									
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	45							°C/W				
Operating Junction Temperature Range	T_j	-55 ~ +125							°C				
Storage Temperature Range	T_{stg}	-55 ~ +150							°C				

1) Measured at 1MHz and applied reverse voltage of 4 V D.C.

2) P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.

Typical Characteristics

Fig.1 Forward Current Derating Curve

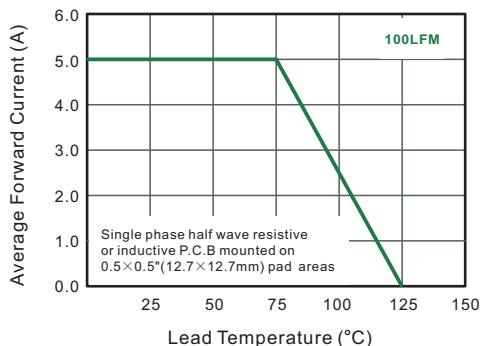


Fig.2 Typical Reverse Characteristics

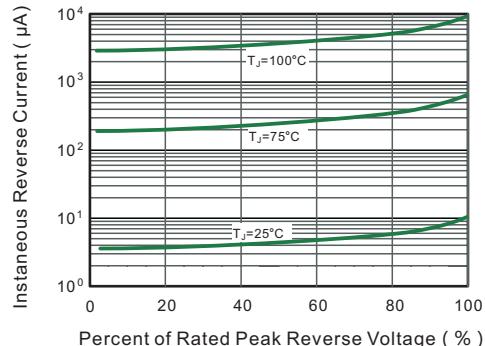


Fig.3 Typical Forward Characteristic

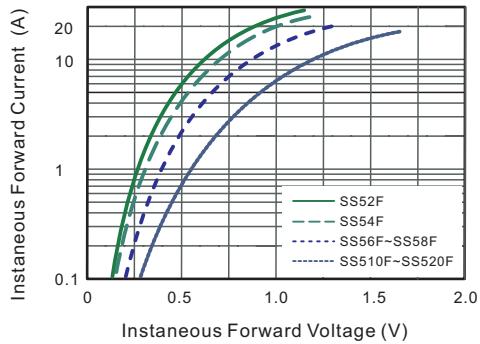


Fig.4 Typical Junction Capacitance

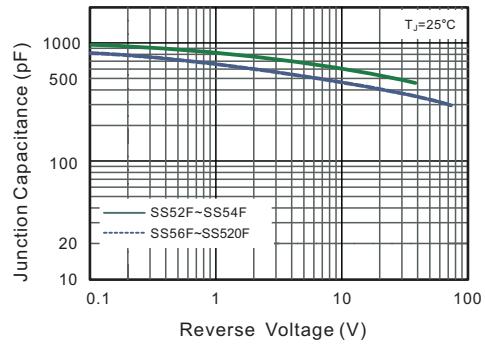


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

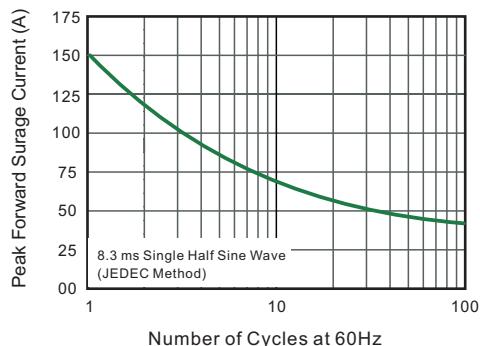
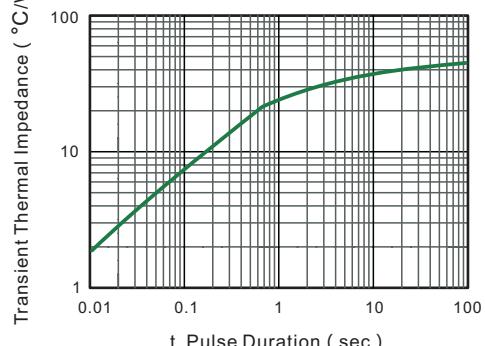


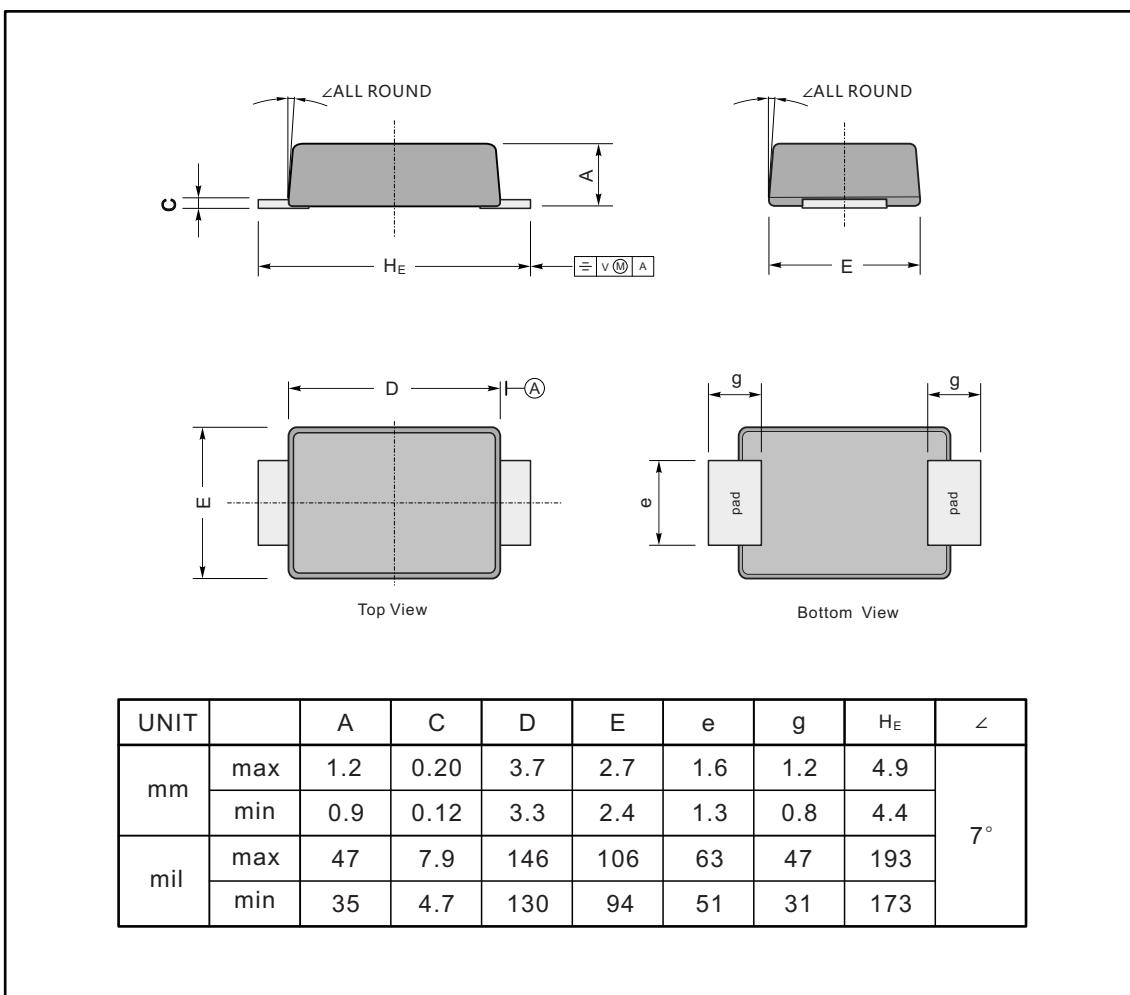
Fig.6- Typical Transient Thermal Impedance



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMAF



The recommended mounting pad size

