

### SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 20 --- 200 V  
CURRENT: 3.0A

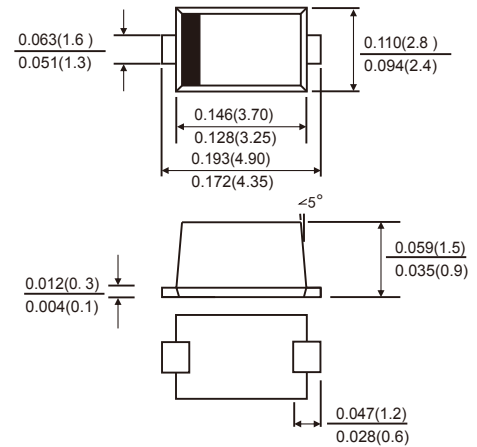
#### FEATURES

- 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

#### SMAF



Dimensions in inches and (millimeters)

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

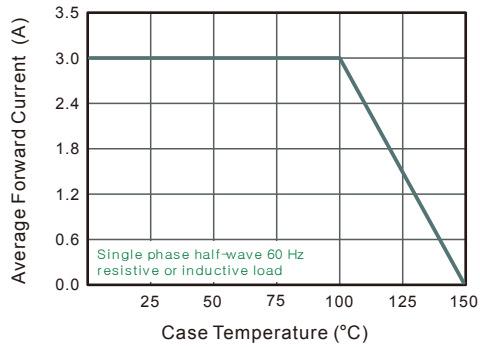
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	SS32F	SS34F	SS34AF	SS36F	SS38F	SS310F	SS312F	SS315F	SS320F	Units	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	40	45	60	80	100	120	150	200	V	
Maximum RMS voltage	$V_{RMS}$	14	28	31.5	42	56	70	84	105	140	V	
Maximum DC Blocking Voltage	$V_{DC}$	20	40	45	60	80	100	120	150	200	V	
Maximum Average Forward Rectified Current	$I_{F(AV)}$	3.0									A	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	80									A	
Max Instantaneous Forward Voltage at 3A	$V_F$	0.55	0.70			0.85		0.95			V	
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$	$I_R$	0.5				0.3					mA	
		5				3						
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	250				180					pF	
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$ $R_{\theta JC}$	70					18					$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_j$	-55 ~ +150										$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 ~ +150										$^\circ\text{C}$

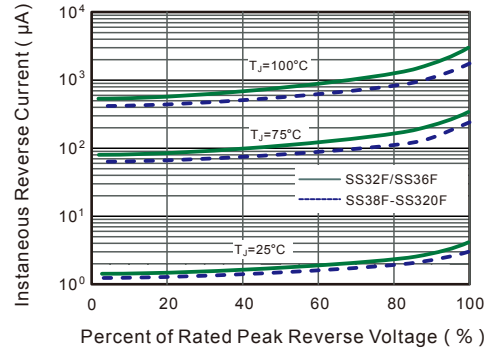
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

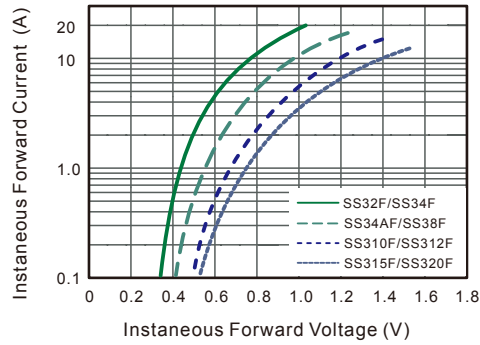
**Fig.1 Forward Current Derating Curve**



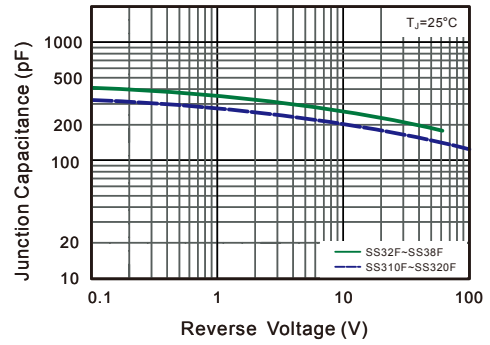
**Fig.2 Typical Reverse Characteristics**



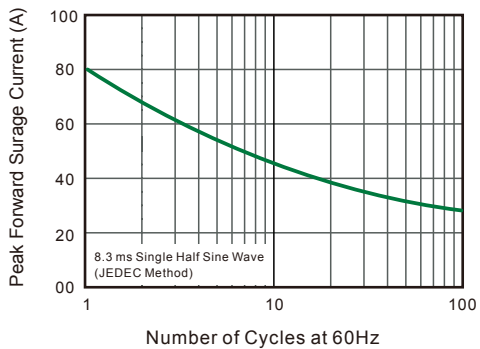
**Fig.3 Typical Forward Characteristic**



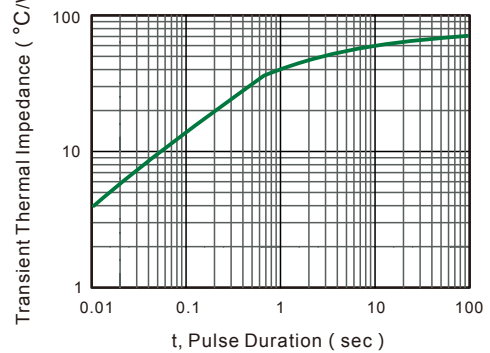
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



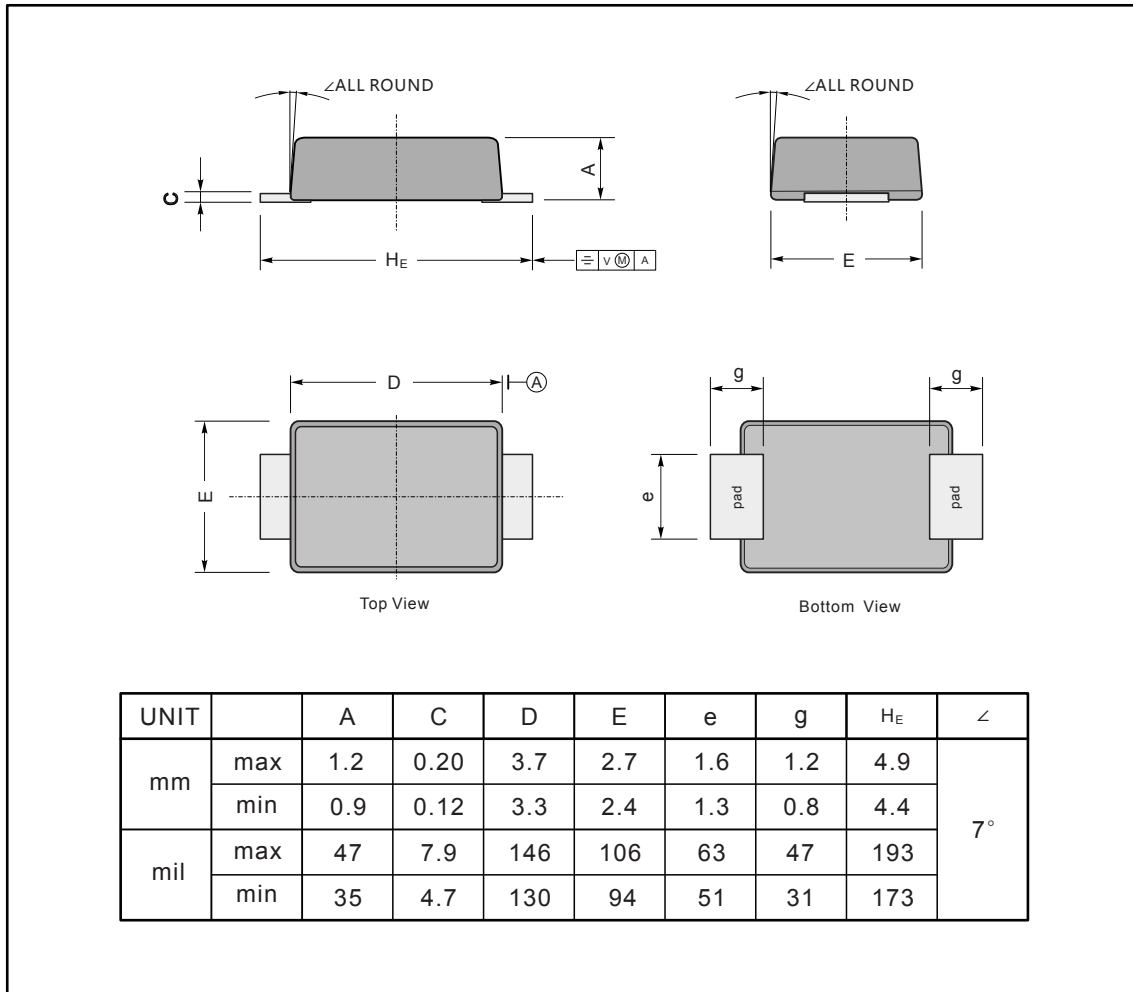
**Fig.5- Typical Transient Thermal Impedance**



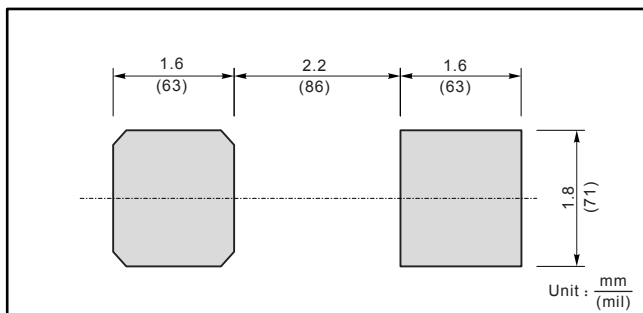
## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMAF



### The recommended mounting pad size



### Marking

Type number	Marking code
ES1AF	ES1A
ES1BF	ES1B
ES1CF	ES1C
ES1DF	ES1D
ES1EF	ES1E
ES1GF	ES1G
ES1JF	ES1J