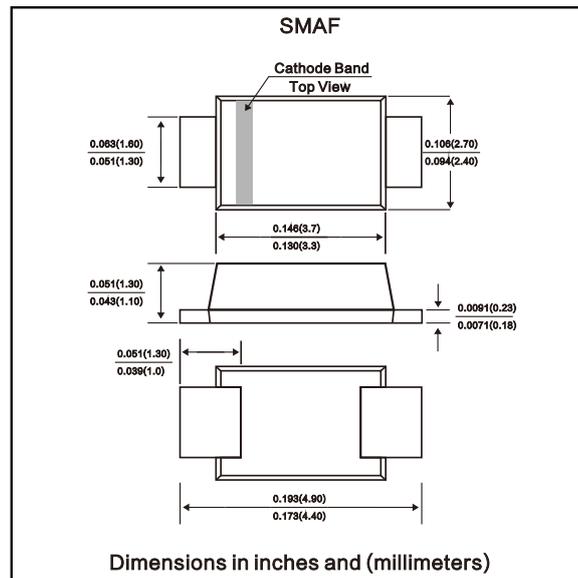


**FEATURES**

- 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

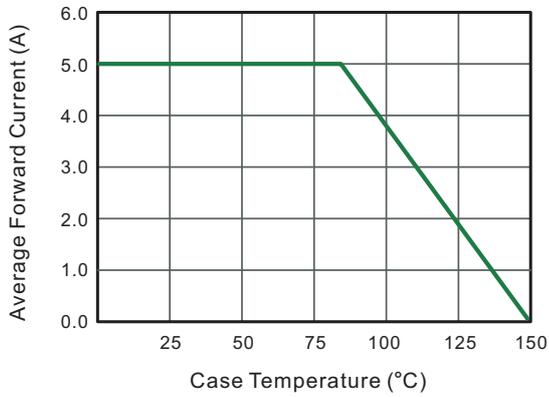
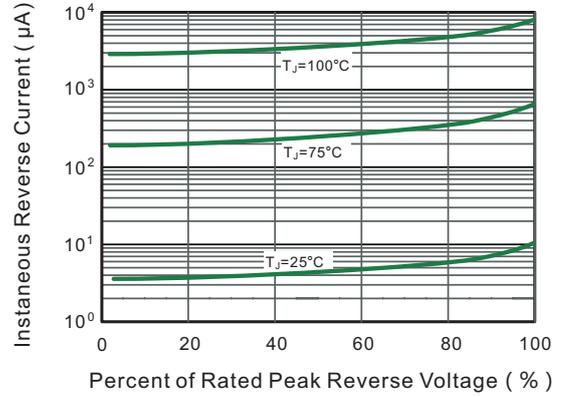
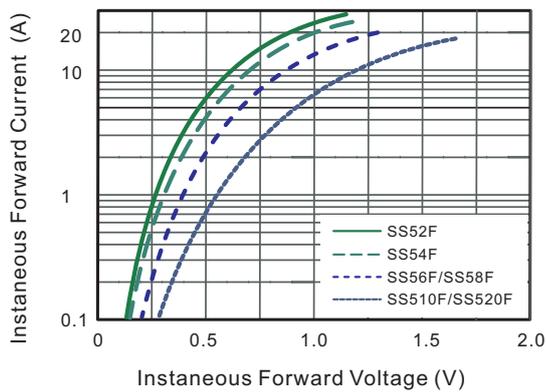
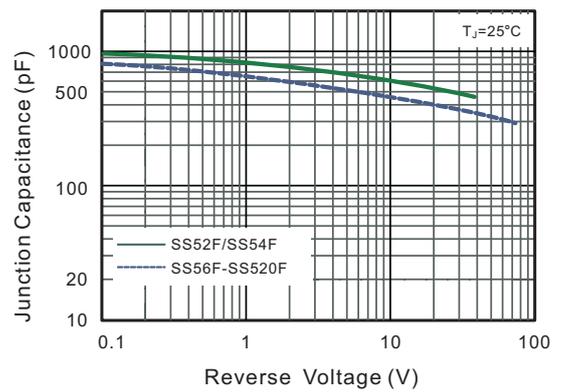
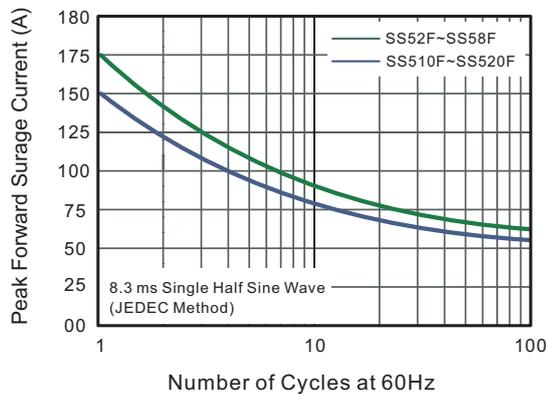

**Absolute Maximum Ratings and Electrical characteristics**

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)	$I_{FSM}$	175					150				A
Max Instantaneous Forward Voltage at 5 A	$V_F$	0.45	0.55	0.70			0.85			V	
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$	$I_R$	1.0					50				mA
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	700			500					pF	
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	50								°C/W	
Operating Junction Temperature Range	$T_j$	-55 ~ +150								°C	
Storage Temperature Range	$T_{stg}$	-55 ~ +150								°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.6- Typical Transient Thermal Impedance**
