



Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 20 to 200V

Forward Current - 5.0A

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Marking Code: SS52~SS520
Simplified outline SMAF and symbol

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}	120							A				
Max Instantaneous Forward Voltage at 5 A	V _F	0.55		0.70		0.85			V				
Maximum DC Reverse Current T _a = 25°C at Rated DC Reverse Voltage T _a = 100°C	I _R	1.0 50							mA				
Typical Junction Capacitance ⁽¹⁾	C _j	500		300									
Typical Thermal Resistance ⁽²⁾	R _{θJA}	60							°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

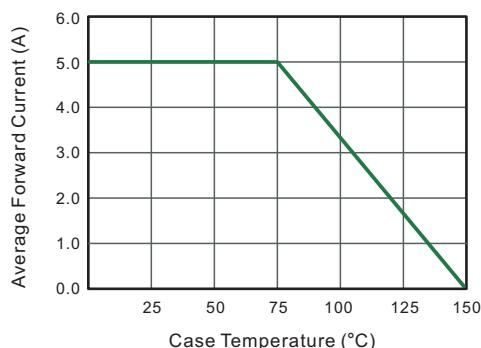


Fig.2 Typical Reverse Characteristics

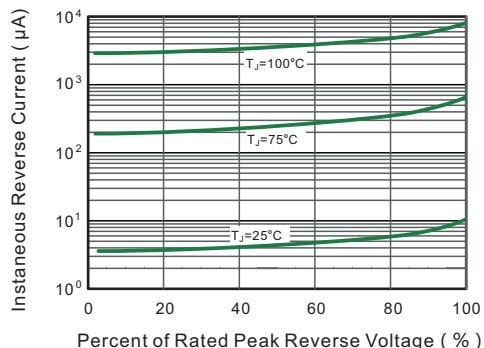


Fig.3 Typical Forward Characteristic

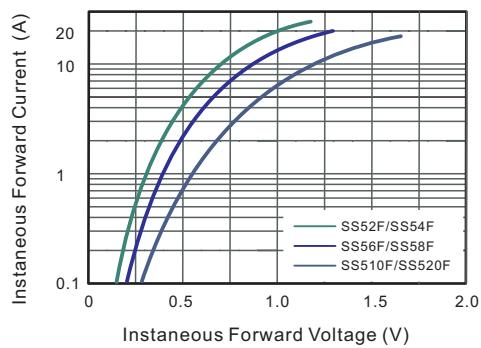


Fig.4 Typical Junction Capacitance

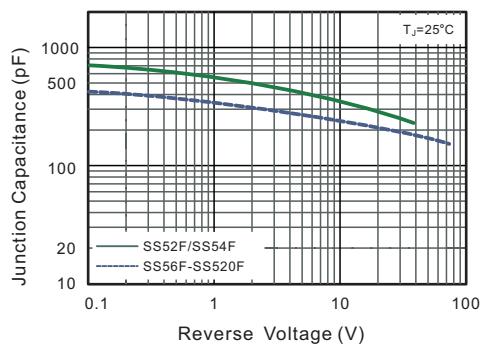


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

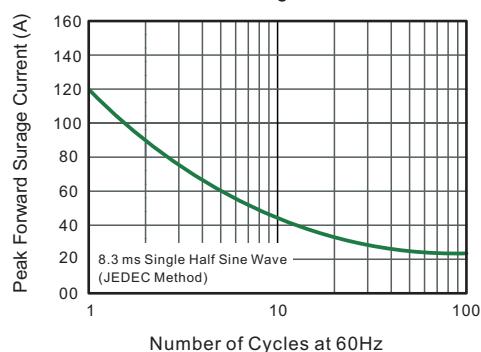
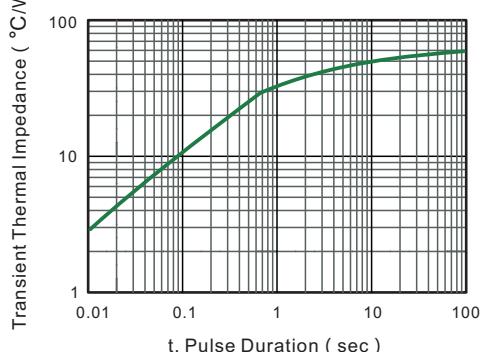


Fig.6- Typical Transient Thermal Impedance

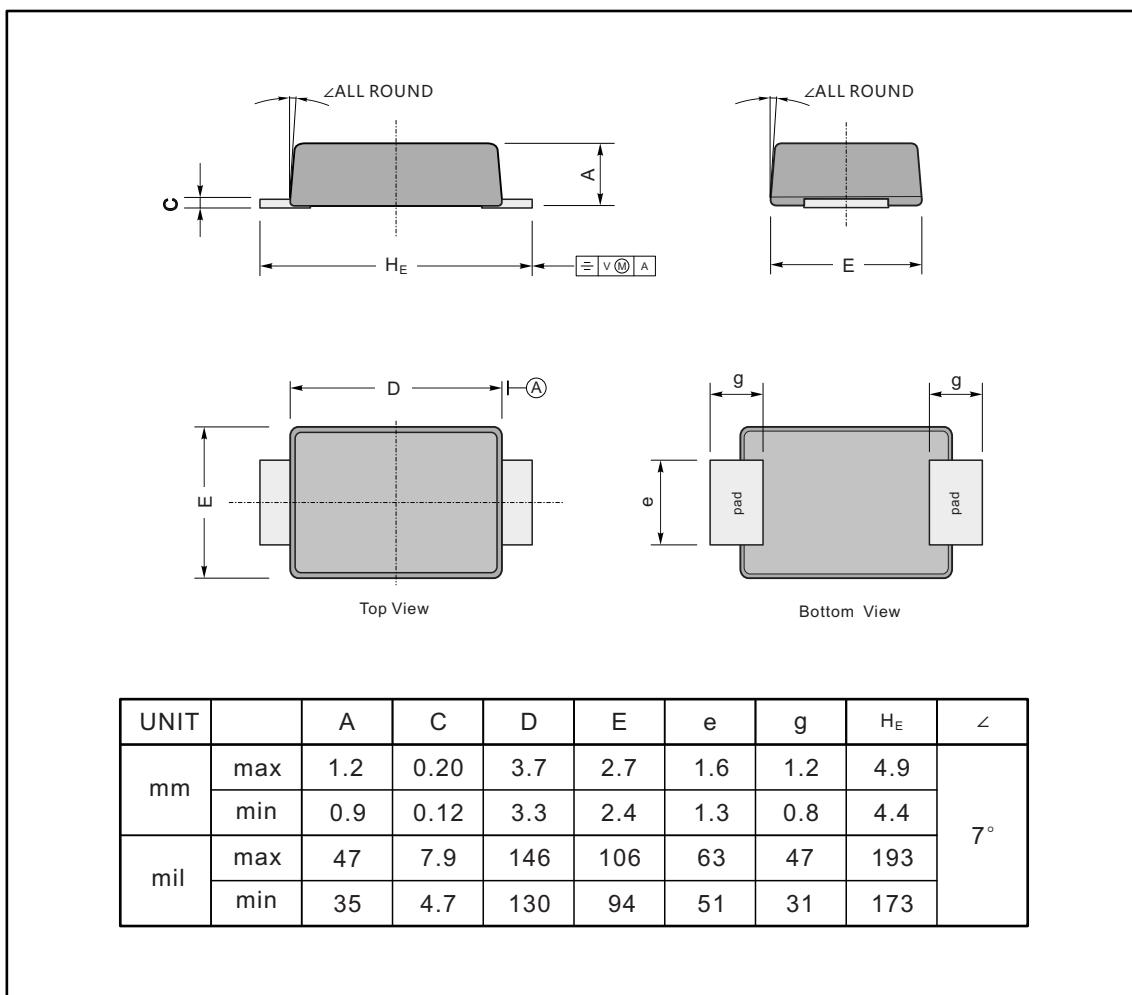




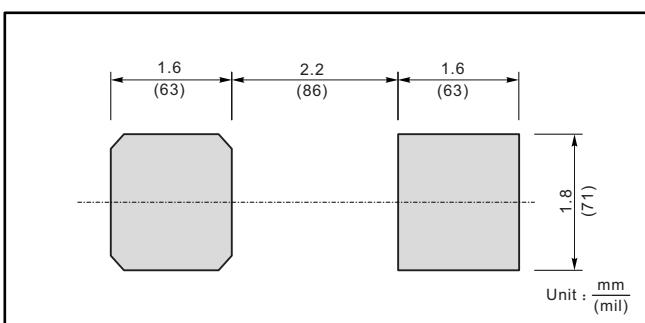
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMAF



The recommended mounting pad size



Marking

Type number	Marking code
SS52F	SS52
SS54F	SS54
SS56F	SS56
SS58F	SS58
SS510F	SS510
SS512F	SS512
SS515F	SS515
SS520F	SS520