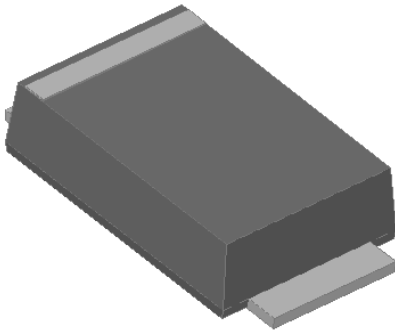


Surface Mount Schottky Rectifier



Features

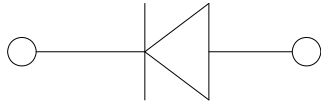
- Guard ring for overvoltage protection
- Low power losses
- Extremely fast switching
- High forward surge capability
- High frequency operation
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Part no. with suffix "Q" means AEC-Q101 qualified

Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, automotive and polarity protection applications.

Mechanical Data

- **Package:** SMAF
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end



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 $T_{stg}=25^{\circ}\text{C}$ at Rated DC Reverse Voltage $=100^{\circ}\text{C}$	I _R	1.0 50								mA
Typical Junction Capacitance ¹⁾	C _j	800		500						pF
Typical Thermal Resistance ²⁾	R _{θJA}	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.

■ Characteristics(Typical)

Fig.1 Forward Current Derating Curve

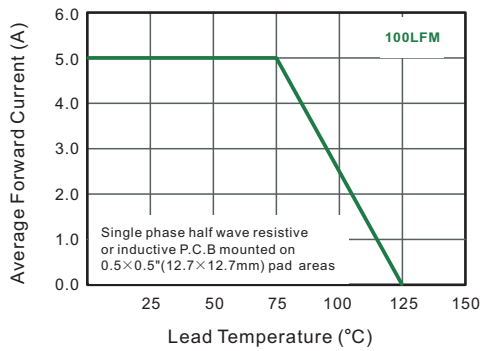


Fig.2 Typical Reverse Characteristics

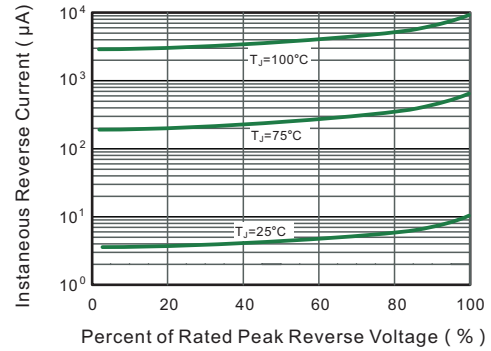


Fig.3 Typical Forward Characteristic

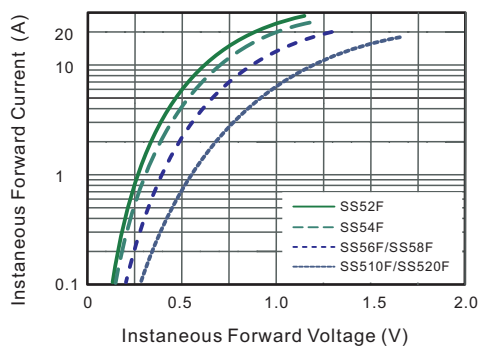


Fig.4 Typical Junction Capacitance

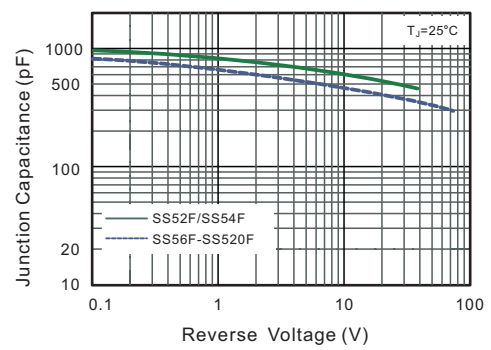


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

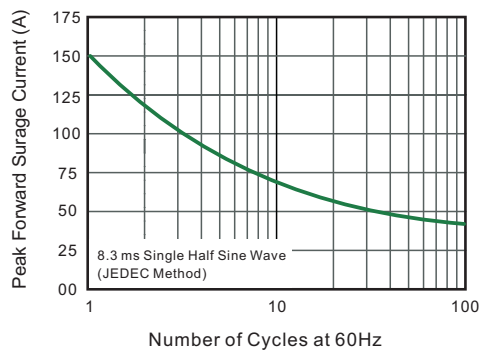
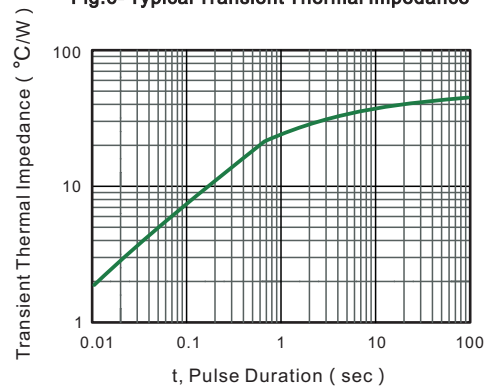


Fig.6- Typical Transient Thermal Impedance

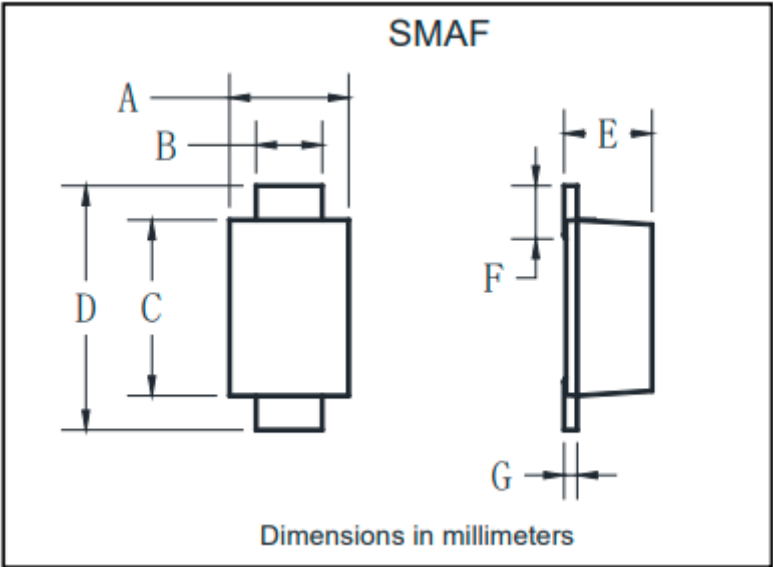


SS52F THRU SS520F

■ Ordering Information (Example)

P/N	PKG	QTY
SS52F-SS520F	SMAF	3000

■ Outline Dimensions



SMAF		
Dim	Min	Max
A	2.40	2.80
B	1.35	1.45
C	3.40	3.60
D	4.40	4.80
E	1.05	1.25
F	0.50	1.00
G	0.15	0.22