

1 Ampere Surface Mount Schottky Barrier Rectifier

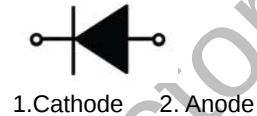


SS12F-SS120F

Features:

- ☐ Metal silicon junction, majority carrier conduction
- ☐ For surface mounted applications
- ☐ Low power loss, high efficiency
- ☐ Fast switching for high efficiency
- ☐ High forward surge current capability
- ☐ For use in low voltage, high frequency inverters

SMAF



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	SS12F	SS14F	SS16F	SS18F	SS110F	SS112F	SS115F	SS120F	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	$I_{F(AV)}$	1.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	25								A
Max Instantaneous Forward Voltage at 1 A	V_F	0.55	0.70	0.85			0.90		V	
Maximum DC Reverse Current $T_a = 25^{\circ}\text{C}$ at Rated DC Reverse Voltage $T_a = 100^{\circ}\text{C}$	I_R	0.3 10			0.2 5		0.1 2		mA	
Typical Junction Capacitance ⁽¹⁾	C_j	110	80							pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	95								°C/W
Operating Junction Temperature Range	T_j	-55 ~ +125								°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.

Typical Characteristics

Fig.1 Forward Current Derating Curve

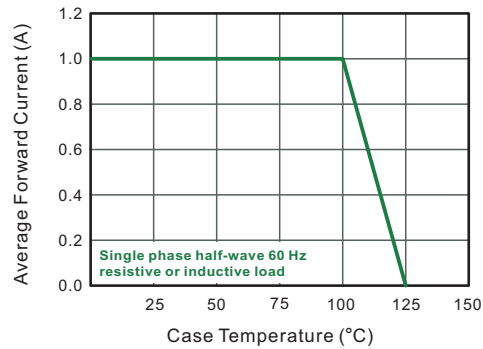


Fig.2 Typical Reverse Characteristics

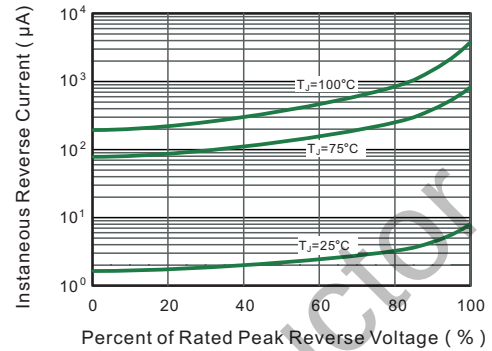


Fig.3 Typical Forward Characteristic

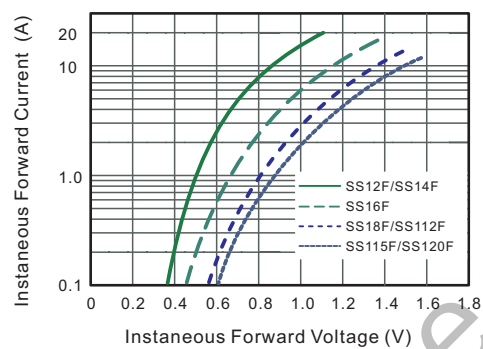


Fig.4 Typical Junction Capacitance

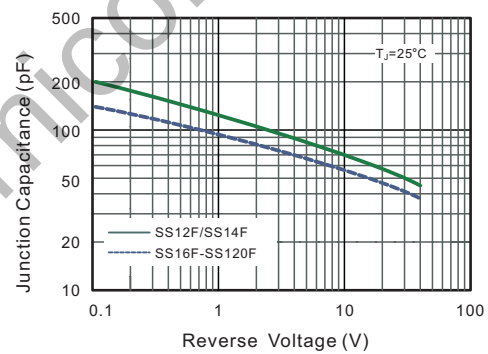


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

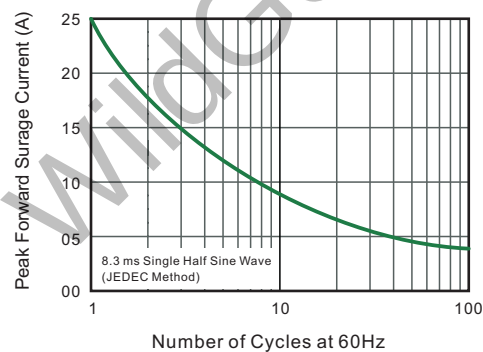
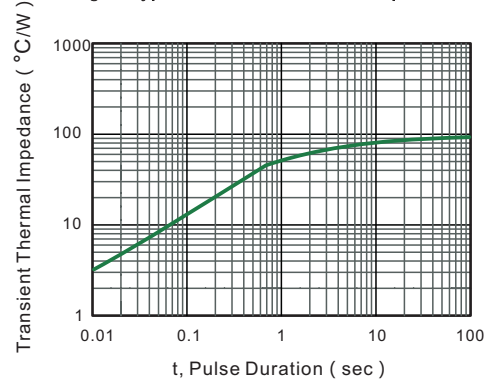
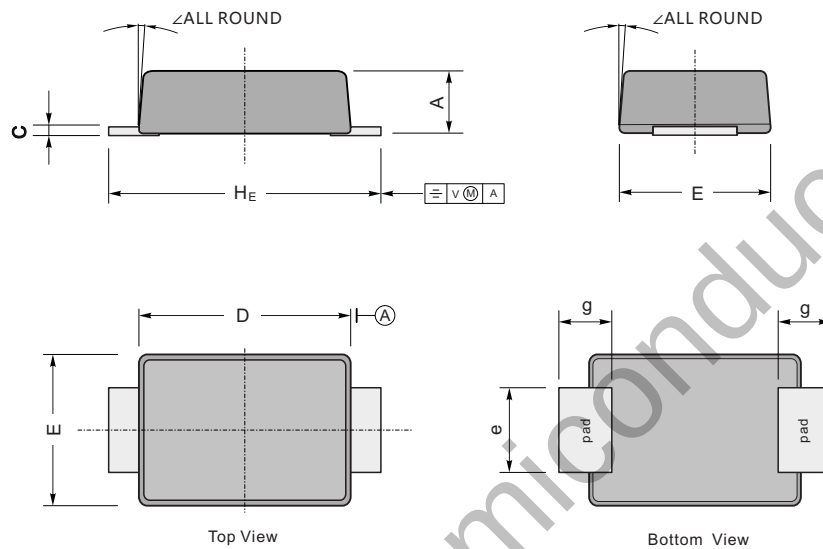


Fig.6- Typical Transient Thermal Impedance

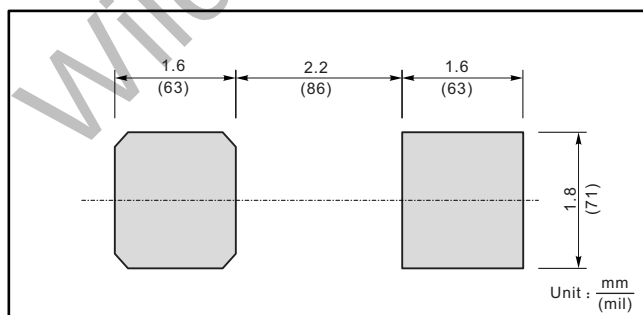


Package Dimension**SMAF**

Unit: mm



UNIT		A	C	D	E	e	g	H _E	∠
mm	max	1.2	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	47	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

The recommended mounting pad size**Marking**

Type number	Marking code
SS12F	SS12
SS14F	SS14
SS16F	SS16
SS18F	SS18
SS110F	SS110
SS112F	SS112
SS115F	SS115
SS120F	SS120