

3 Ampere Surface Mount Schottky Barrier Rectifier



SS32F-SS320F

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	SS32F	SS34F	SS345F	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	32	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 at Rated DC Reverse Voltage $T_a = 25^\circ\text{C}$ $T_a = 100^\circ\text{C}$	I_R	0.5 5				0.3 3					mA	
Typical Junction Capacitance ⁽¹⁾	C_j	250			180						pF	
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$ $R_{\theta JC}$	70 18										$^\circ\text{C/W}$
Operating Junction Temperature Range	T_j	-55 ~ +125									$^\circ\text{C}$	
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.

Typical Characteristics

Fig.1 Forward Current Derating Curve

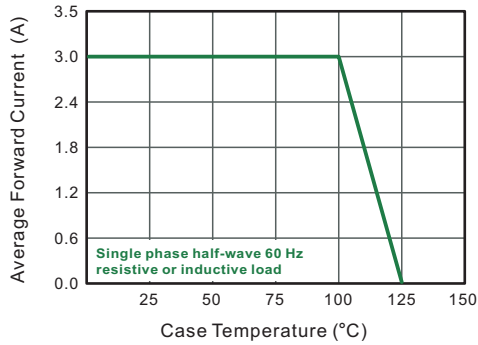


Fig.2 Typical Reverse Characteristics

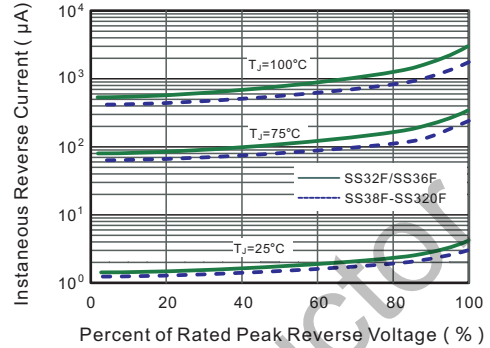


Fig.3 Typical Forward Characteristic

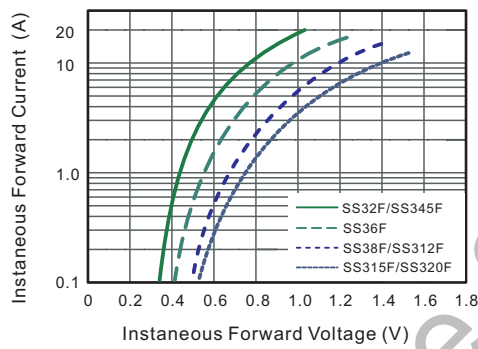


Fig.4 Typical Junction Capacitance

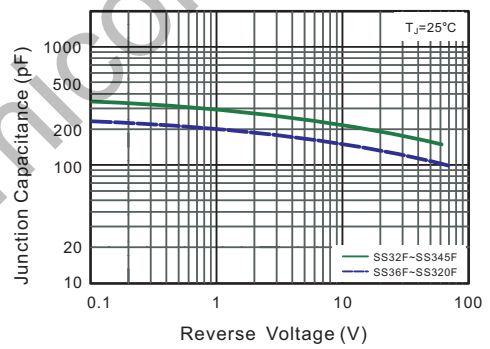


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

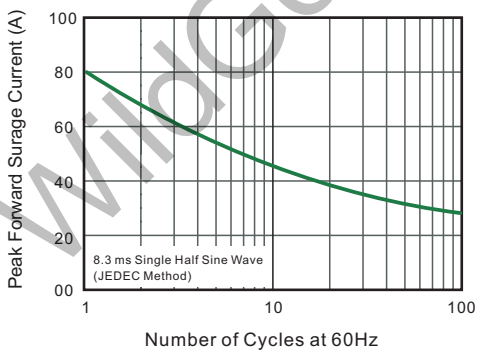
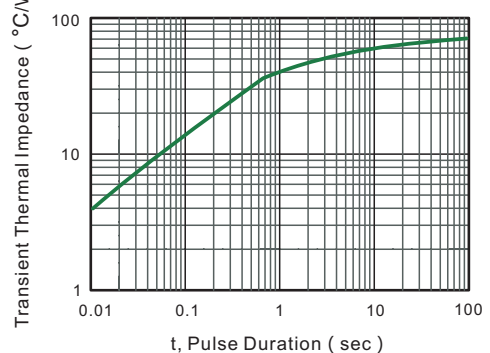
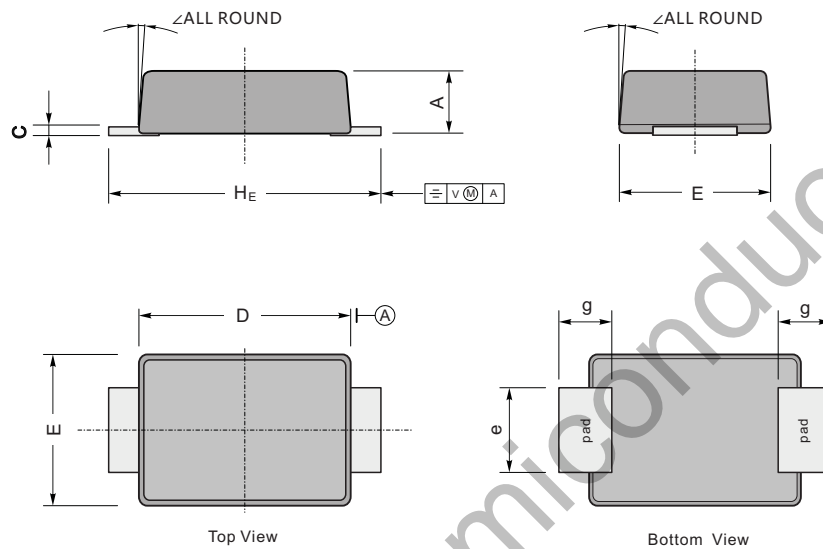


Fig.5- Typical Transient Thermal Impedance

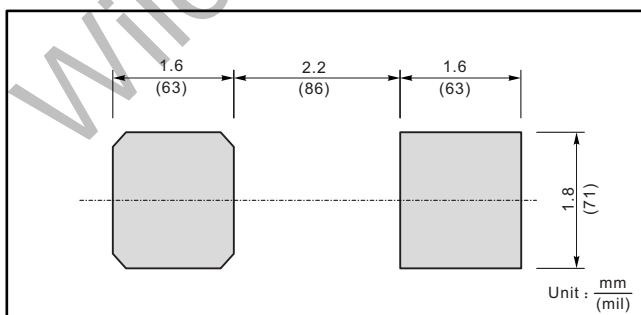


Package Dimension**SMAF**

Unit: mm



UNIT		A	C	D	E	e	g	H _E	\angle
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
SS32F	SS32
SS34F	SS34
SS345F	SS345
SS36F	SS36
SS38F	SS38
SS310F	SS310
SS312F	SS312
SS315F	SS315
SS320F	SS320

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