

**Surface Mount Schottky Barrier Rectifier**

**VOLTAGE RANGE 20 to 200 Volts CURRENT 3.0 Amperes**

**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
- \* Case: SMAF
- \* P/N suffix V means AEC-Q101 qualified
- \* P/N suffix V means Halogen-free

**PINNING**

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View  
Marking Code: SS32 — SS320  
Simplified outline SMAF and symbol

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

**MAXIMUM RATINGS** (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	SS32F	SS34F	SS36F	SS38F	SS310F	SS312F	SS315F	SS320F	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	20	40	60	80	100	120	150	200	Volts
Maximum RMS Voltage	VRMS	14	28	42	56	70	84	105	140	Volts
Maximum DC Blocking Voltage	Vdc	20	40	60	80	100	120	150	200	Volts
Maximum Average Forward Rectified Current at TA = 75 °C	IO	3.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	75								Amps
Typical Current Squared Time	i <sup>2</sup> T	23.3								A <sup>2</sup> S
Typical Thermalresistance (Note 2)	RθJL	20								°C/W
	RθJA	40								°C/W
Typical Junction Capacitance (Note 1)	CJ	250			160					pF
Operating and Storage Temperature Range	TJ,TSTG	-55 to + 150								°C

**ELECTRICAL CHARACTERISTICS** (At TA = 25°C unless otherwise noted)

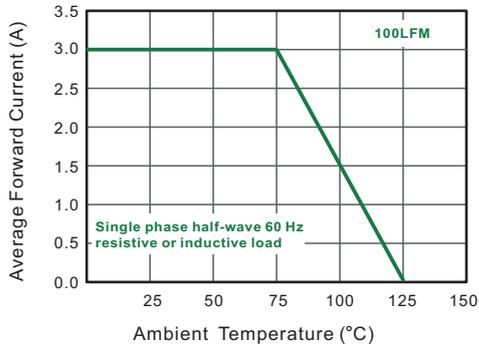
CHARACTERISTICS	SYMBOL	SS32F	SS34F	SS36F	SS38F	SS310F	SS312F	SS315F	SS320F	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC	VF	0.55		0.70		0.85				Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@TA = 25 °C	50								uAmps
	@TA = 150 °C	10								mAmps

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
2. Thermal resistance junction to terminal 5X5mm<sup>2</sup> copper pads to each terminal.

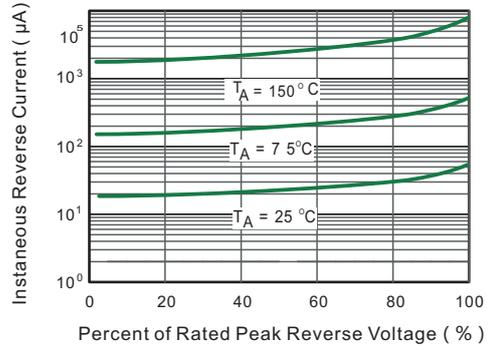
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# RATING AND CHARACTERISTICS CURVES (SS3xxF)

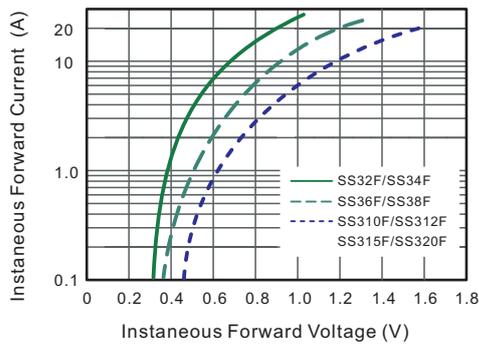
**Fig.1 Forward Current Derating Curve**



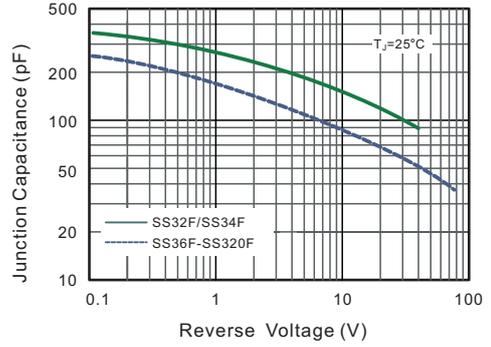
**Fig.2 Maximum Reverse Characteristics**



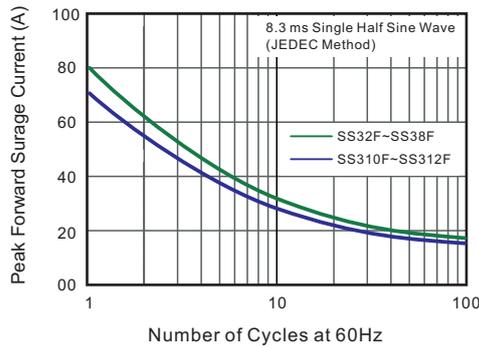
**Fig.3 Typical Forward Characteristic**



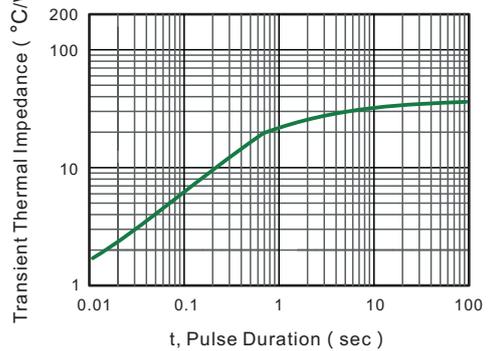
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



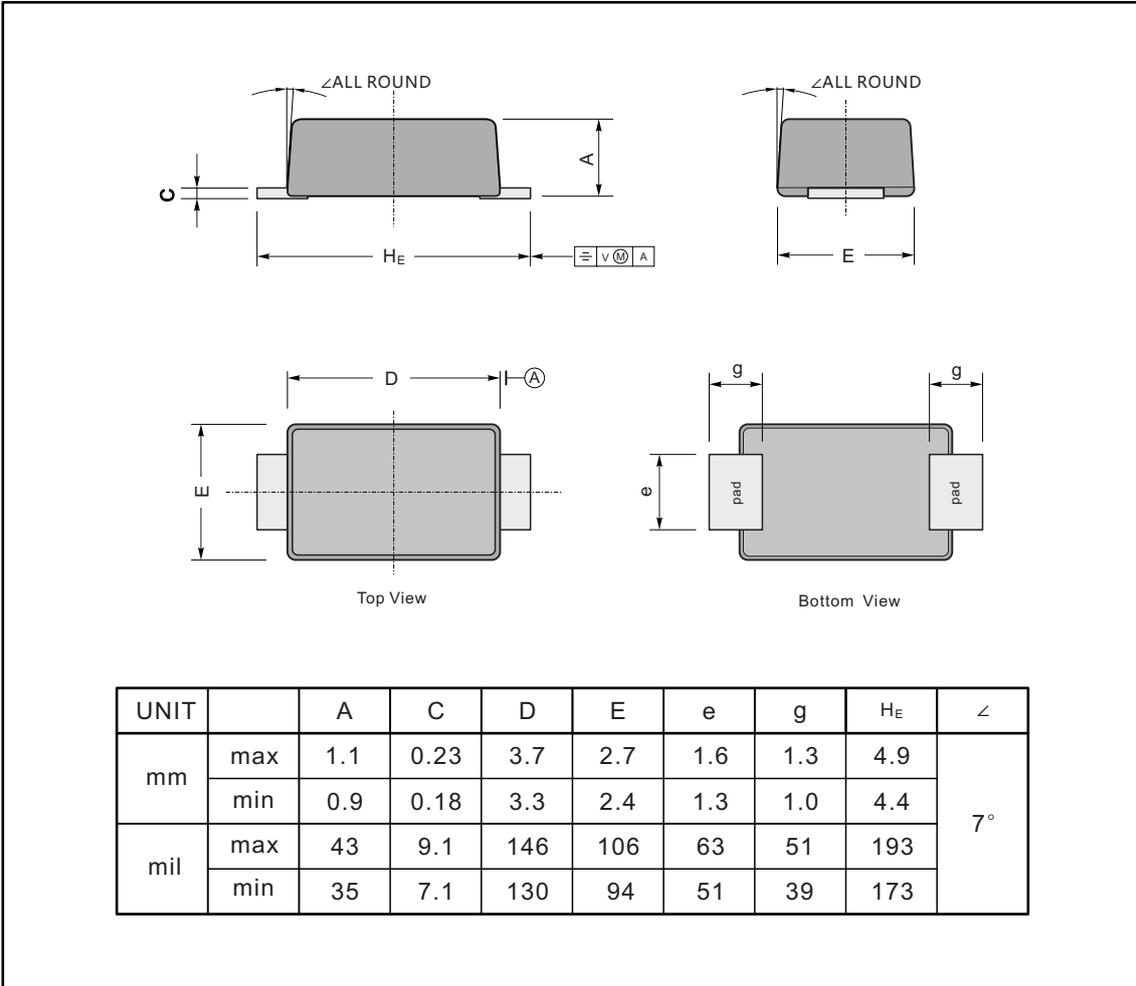
**Fig.6- Typical Transient Thermal Impedance**



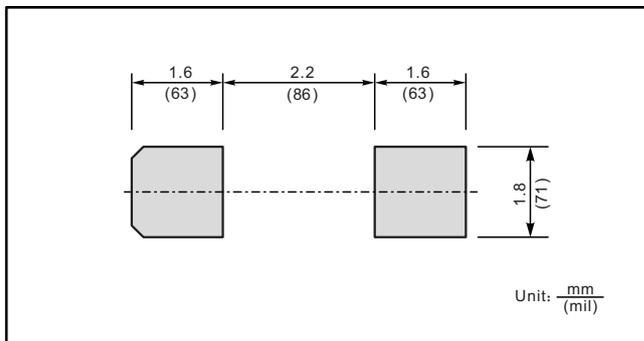
# PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMAF



## The recommended mounting pad size



## Marking

Type number	Marking code
SS32F	SS32
SS34F	SS34
SS36F	SS36
SS38F	SS38
SS310F	SS310
SS312F	SS312
SS315F	SS315
SS320F	SS320

## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMAF	-T	3,000	12,000	---	---	178	390*205*310	96,000	---