

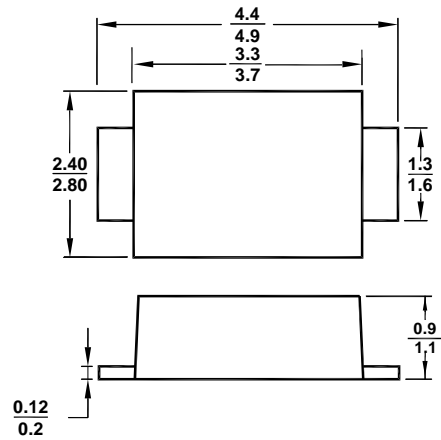
# SDS32F THRU SDS320F

**Surface Mount Schottky Barrier Rectifier**  
**Reverse Voltage - 20 to 200 V**  
**Forward Current - 3 A**

## 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

## SMAF



All Dimensions in mm

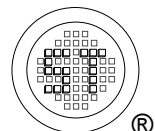
## Maximum Ratings and Electrical Characteristics

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

Parameter	Symbols	SDS32F	SDS34F	SDS36F	SDS38F	SDS310F	SDS312F	SDS315F	SDS320F	Unit
	Marking	SS32	SS34	SS36	SS38	SS310	SS312	SS315	SS320	-
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	$I_{F(AV)}$	3								A
Peak Forward Surge Current 8.3 ms Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	80				70				A
Maximum Instantaneous Forward Voltage at 3 A	$V_F$	0.55	0.7	0.85	0.9	0.95				V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	$T_a = 25^\circ\text{C}$ 0.5		$T_a = 100^\circ\text{C}$ 10		0.3			5	mA
Typical Junction Capacitance <sup>1)</sup>	$C_j$	250	160						pF	
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	40								°C/W
Operating Junction Temperature Range	$T_j$	- 55 to + 125								°C
Storage Temperature Range	$T_{stg}$	- 55 to + 150								°C

<sup>1)</sup> Measured at 1MHz and applied reverse voltage of 4 V D.C.

<sup>2)</sup> P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.



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Fig.1 Forward Current Derating Curve

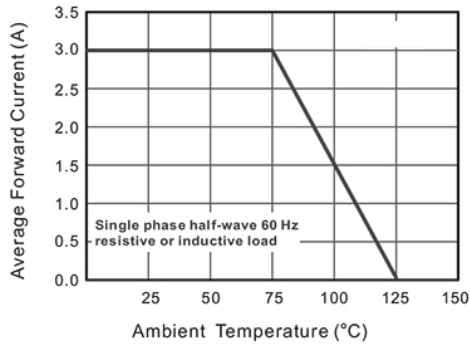


Fig.2 Typical Reverse Characteristics

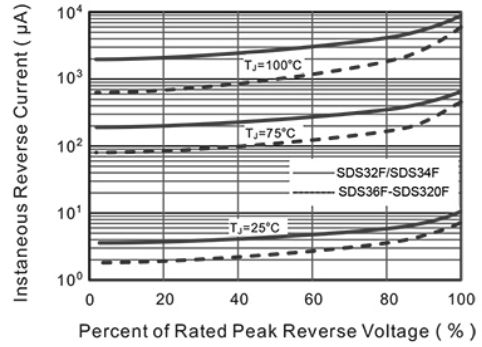


Fig.3 Typical Forward Characteristic

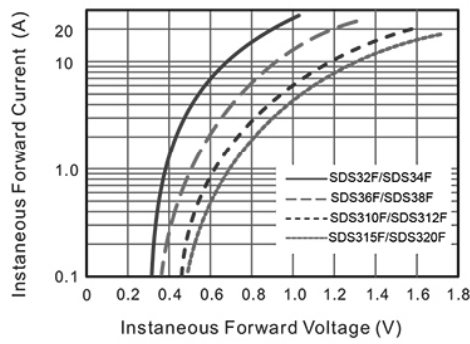


Fig.4 Typical Junction Capacitance

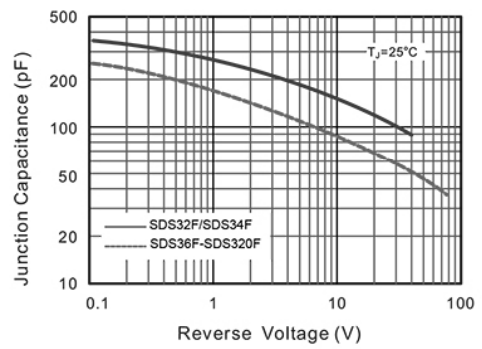


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

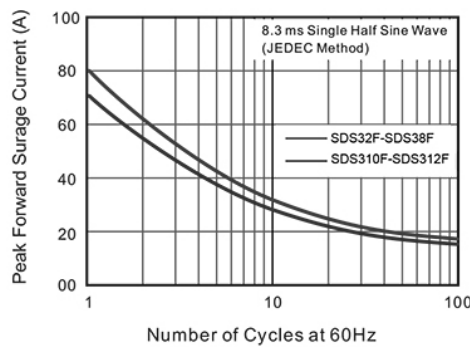
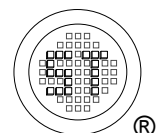
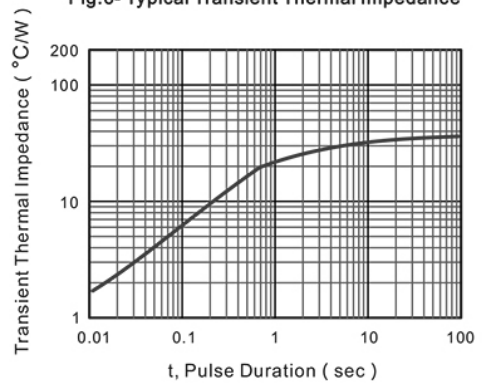


Fig.6 Typical Transient Thermal Impedance



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