

# SDS52F THRU SDS520F

## Surface Mount Schottky Barrier Rectifier

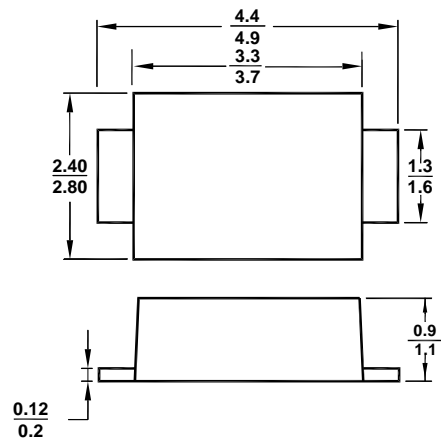
Reverse Voltage - 20 to 200 V

Forward Current - 5 A

### SMAF

#### 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



All Dimensions in mm

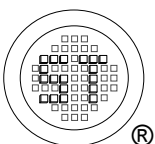
#### Maximum Ratings and Electrical Characteristics

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	SDS52F	SDS54F	SDS56F	SDS58F	SDS510F	SDS512F	SDS515F	SDS520F	Unit
	Marking	SS52	SS54	SS56	SS58	SS510	SS512	SS515	SS520	-
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								A
Peak Forward Surge Current 8.3 ms Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	150								A
Maximum Instantaneous Forward Voltage at 5 A	$V_F$	0.45	0.55	0.7		0.85			V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	1								mA
		50								
Typical Junction Capacitance <sup>1)</sup>	$C_j$	800		500					pF	
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	45								°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 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.

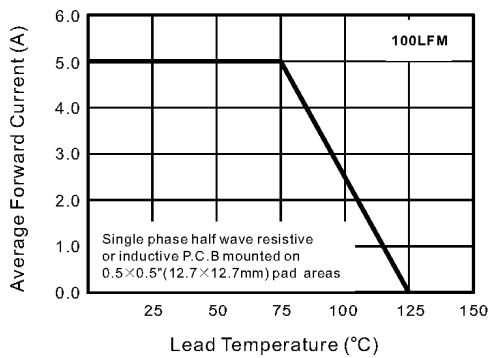


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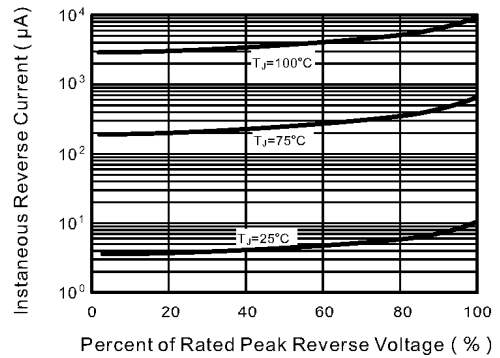


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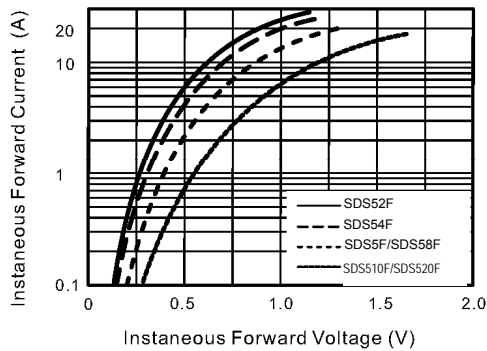
**Fig.1 Forward Current Derating Curve**



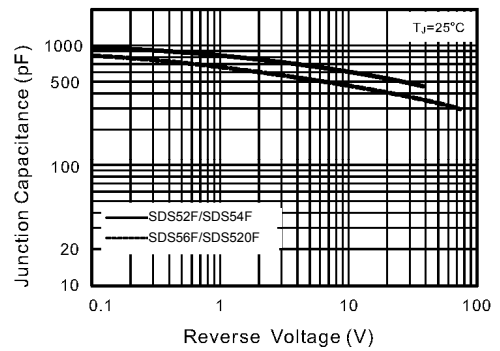
**Fig.2 Typical Reverse Characteristics**



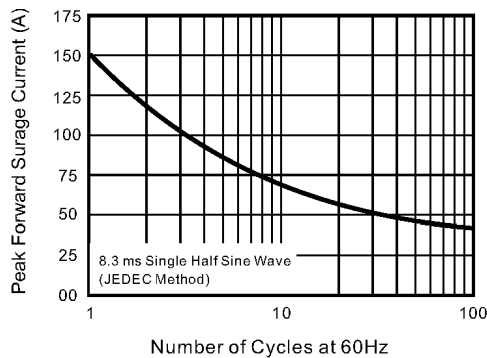
**Fig.3 Typical Forward Characteristic**



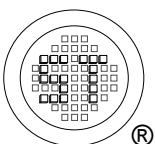
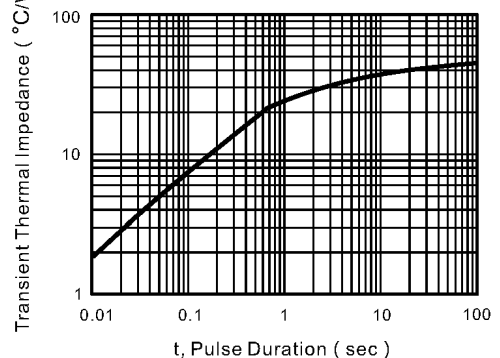
**Fig.4 Typical Junction Capacitance**



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



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



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