

# SDS12F THRU SDS120F-HAF

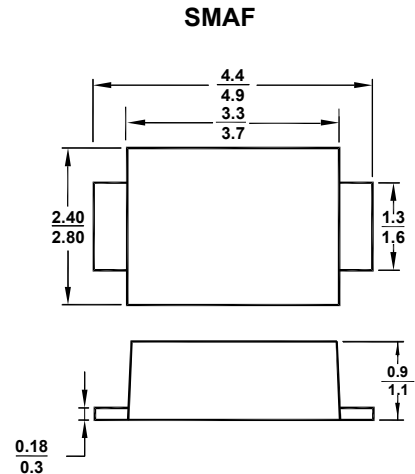
## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 20 to 200 V

Forward Current - 1 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
- Halogen and Antimony Free(HAF), RoHS compliant



All Dimensions in mm

### Mechanical Data

- **Case:** SMAF molded plastic body
- **Terminals:** Solderable per MIL-STD-750, Method 2026

### Maximum Ratings and Electrical Characteristics

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

Parameter	Symbols	SDS12F	SDS14F	SDS16F	SDS18F	SDS110F	SDS112F	SDS115F	SDS120F	Unit	
	Marking	SS12	SS14	SS16	SS18	SS110	SS112	SS115	SS120	-	
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								A	
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	40				30				A	
Maximum Instantaneous Forward Voltage at 1 A	$V_F$	0.55	0.7		0.85		0.9		V		
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	$T_a = 25^\circ\text{C}$ 0.3				$T_a = 100^\circ\text{C}$ 0.2		0.1		mA	
		10				5		2			
Typical Junction Capacitance <sup>1)</sup>	$C_j$	110			80				pF		
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	115									°C/W
Operating Junction Temperature Range	$T_j$	- 55 to + 125									°C
Storage Temperature Range	$T_{stg}$	- 55 to + 150									°C

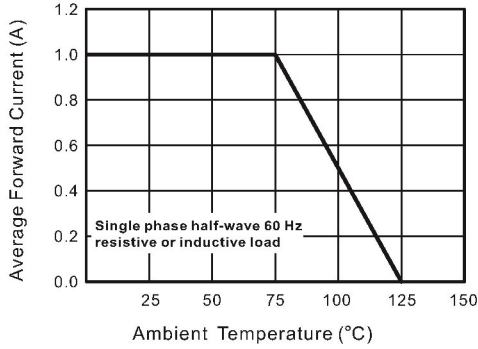
<sup>1)</sup> Measured at 1MHz and applied reverse voltage of 4 V D.C.

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

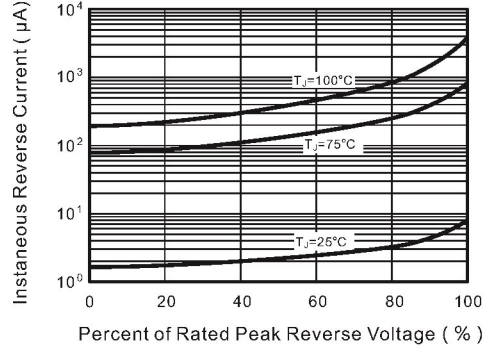
**TOP DYNAMIC**

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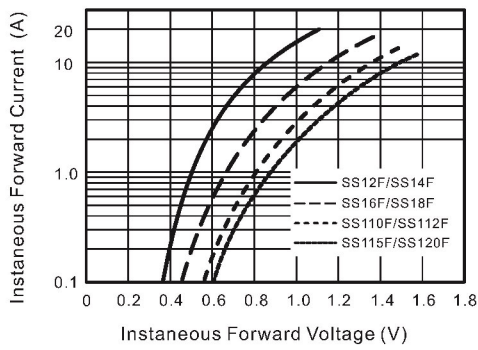
Forward Current Derating Curve



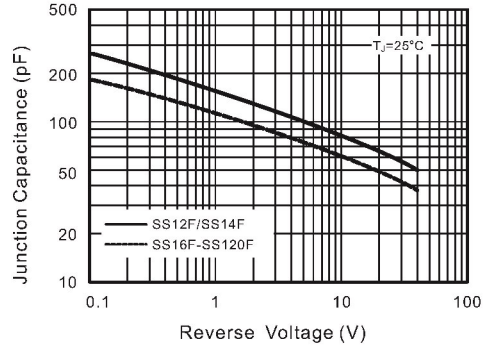
Typical Reverse Characteristics



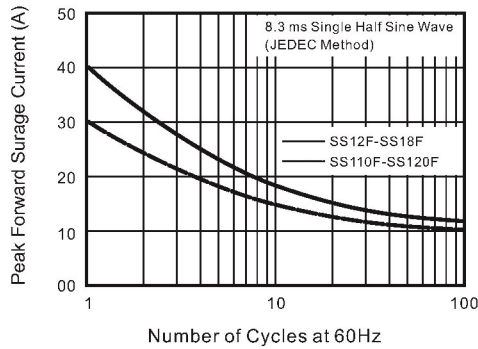
Typical Forward Characteristic



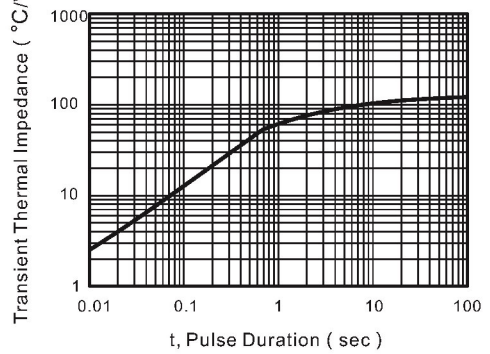
Typical Junction Capacitance



Maximum Non-Repetitive Peak Forward Surge Current



Typical Transient Thermal Impedance



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