

## Surface Mount Schottky Barrier Rectifier


**DO-214AC (SMA)**

**RoHS**  
 COMPLIANT  
 HALOGEN  
**FREE**

### FEATURES

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- Low forward voltage drop
- High surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

### TYPICAL APPLICATIONS

For use in low voltage, high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

### MECHANICAL DATA

**Case:** DO-214AC (SMA)

Molding compound meets UL 94 V-0 flammability rating  
 Base P/N-M3 - halogen-free, RoHS compliant, and commercial grade

**Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

M3 suffix meets JESD 201 class 1A whisker test

**Polarity:** Color band denotes the cathode end

PRIMARY CHARACTERISTICS	
Package	DO-214AC (SMA)
$I_{F(AV)}$	2.0 A
$V_{RRM}$	50 V, 60 V
$I_{FSM}$	40 A
$V_F$ at $I_F = 2.0$ A	0.75 V
$T_J$ max.	150 °C
Diode variations	Single die

MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)				
PARAMETER	SYMBOL	SS25S-M3	SS26S-M3	UNIT
Device marking code		25S	26S	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	60	V
Maximum average forward rectified current (fig. 1)	$I_{F(AV)}$	2.0		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	40		A
Operating junction temperature range	$T_J, T_{STG}$	- 55 to + 150		°C

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)						
PARAMETER	TEST CONDITIONS	SYMBOL	TYP.	MAX.	UNIT	
Maximum instantaneous forward voltage	$I_F = 1.0\text{ A}$	$T_A = 25\text{ }^\circ\text{C}$	$V_F^{(1)}$	0.51	-	V
	$I_F = 2.0\text{ A}$			0.60	0.75	
	$I_F = 1.0\text{ A}$	$T_A = 125\text{ }^\circ\text{C}$		0.43	-	
	$I_F = 2.0\text{ A}$			0.53	0.62	
Maximum reverse current	Rated $V_R$	$T_A = 25\text{ }^\circ\text{C}$	-	200	$\mu\text{A}$	
		$T_A = 125\text{ }^\circ\text{C}$	1.5	10	mA	

**Notes**

- (1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle  
 (2) Pulse test: Pulse width  $\leq 40\text{ ms}$

<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)				
PARAMETER	SYMBOL	SS25S	SS26S	UNIT
Typical thermal resistance	$R_{\theta JA}^{(1)}$	100		$^\circ\text{C/W}$
	$R_{\theta JL}^{(1)}$	28		

**Note**

- (1) PCB mounted with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

<b>ORDERING INFORMATION</b> (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
SS26S-M3/61T	0.064	61T	1800	7" diameter plastic tape and reel
SS26S-M3/5AT	0.064	5AT	7500	13" diameter plastic tape and reel

**RATINGS AND CHARACTERISTICS CURVES**

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

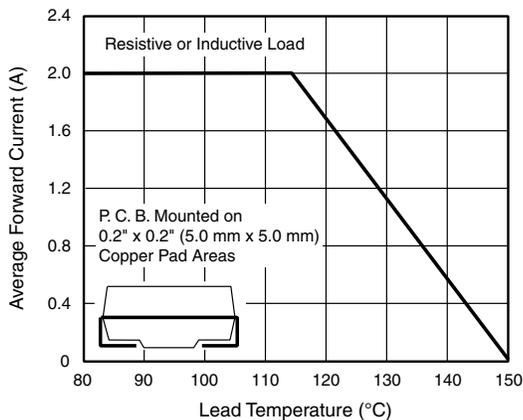


Fig. 1 - Forward Current Derating Curve

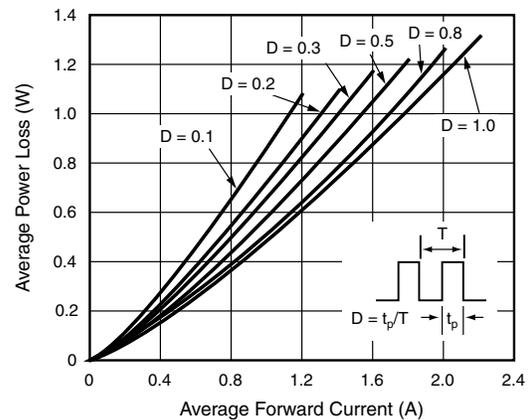


Fig. 2 - Forward Power Loss Characteristics

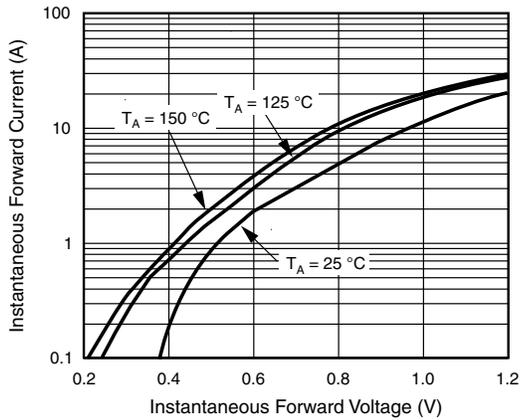


Fig. 3 - Typical Instantaneous Forward Characteristics

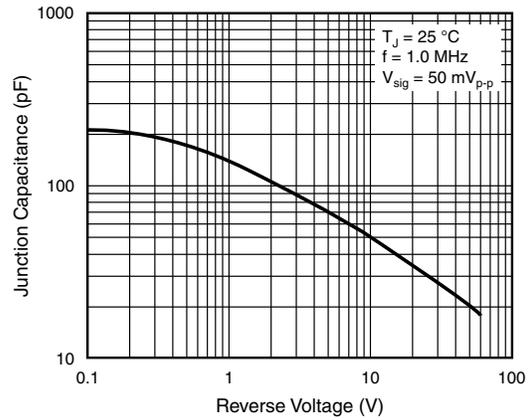


Fig. 5 - Typical Junction Capacitance

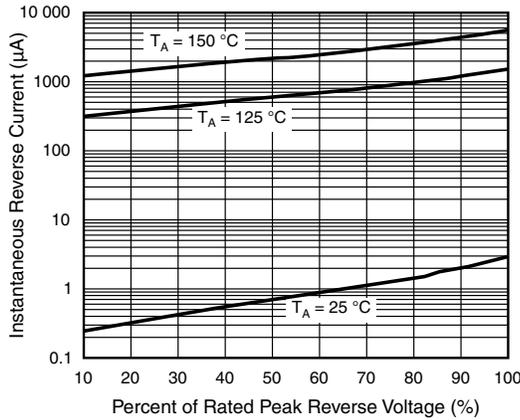
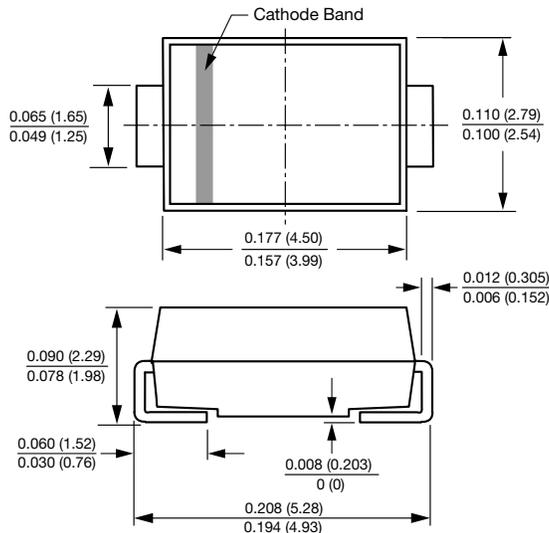
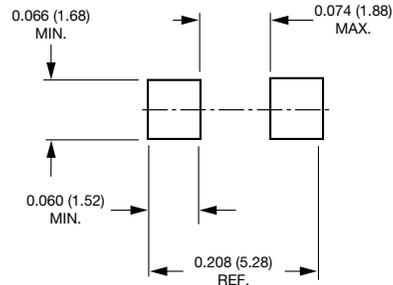


Fig. 4 - Typical Reverse Characteristics

**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)  
**DO-214AC (SMA)**



**Mounting Pad Layout**





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