

Surface-Mount Schottky Barrier Rectifier


SMA (DO-214AC)

 Cathode  Anode

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

TYPICAL APPLICATIONS

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

MECHANICAL DATA
Case: SMA (DO-214AC)

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 2 whisker test

Polarity: color band denotes the cathode end

LINKS TO ADDITIONAL RESOURCES


3D Models

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	2.0 A
V_{RRM}	50 V, 60 V
I_{FSM}	40 A
V_F at $I_F = 2.0$ A	0.53 V
T_J max.	150 °C
Package	SMA (DO-214AC)
Circuit configuration	Single

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

ELECTRICAL CHARACTERISTICS ($T_A = 25$ °C unless otherwise noted)						
PARAMETER	TEST CONDITIONS	SYMBOL	TYP.	MAX.	UNIT	
Maximum instantaneous forward voltage	$I_F = 1.0$ A	$V_F^{(1)}$	0.51	-	V	
						$T_A = 25$ °C
	$I_F = 2.0$ A		$T_A = 125$ °C	0.43		
						$I_F = 2.0$ A
Maximum reverse current	Rated V_R	$I_R^{(2)}$	-	200	μ A	
			$T_A = 125$ °C	1.5	10	mA

Notes

(1) Pulse test: 300 μ s pulse width, 1 % duty cycle

(2) Pulse test: Pulse width \leq 40 ms

THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ 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

ORDERING INFORMATION (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

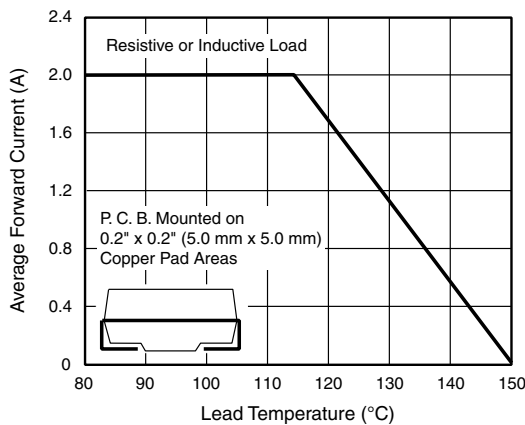
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)


Fig. 1 - Forward Current Derating Curve

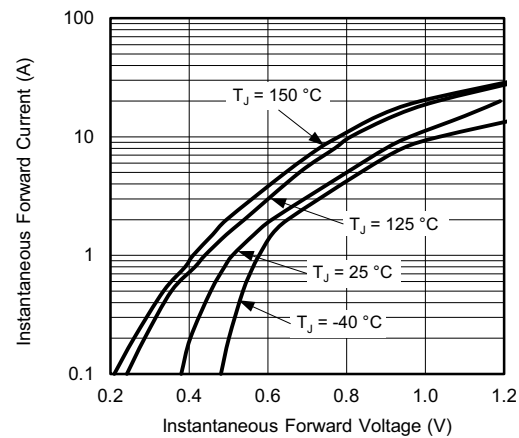


Fig. 3 - Typical Instantaneous Forward Characteristics

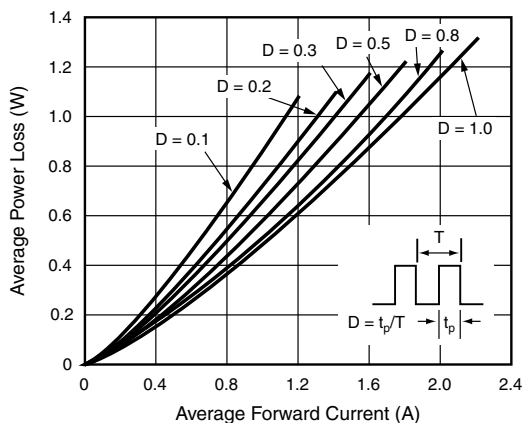


Fig. 2 - Forward Power Loss Characteristics

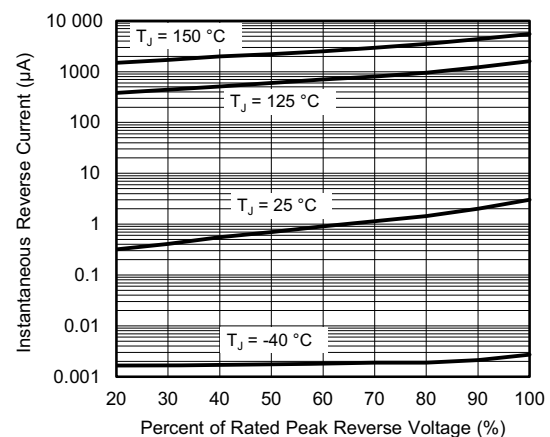


Fig. 4 - Typical Reverse Characteristics

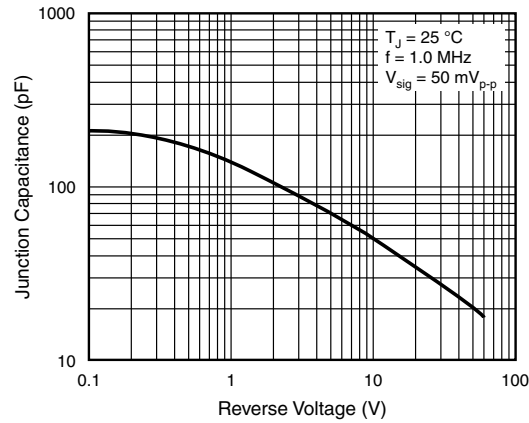
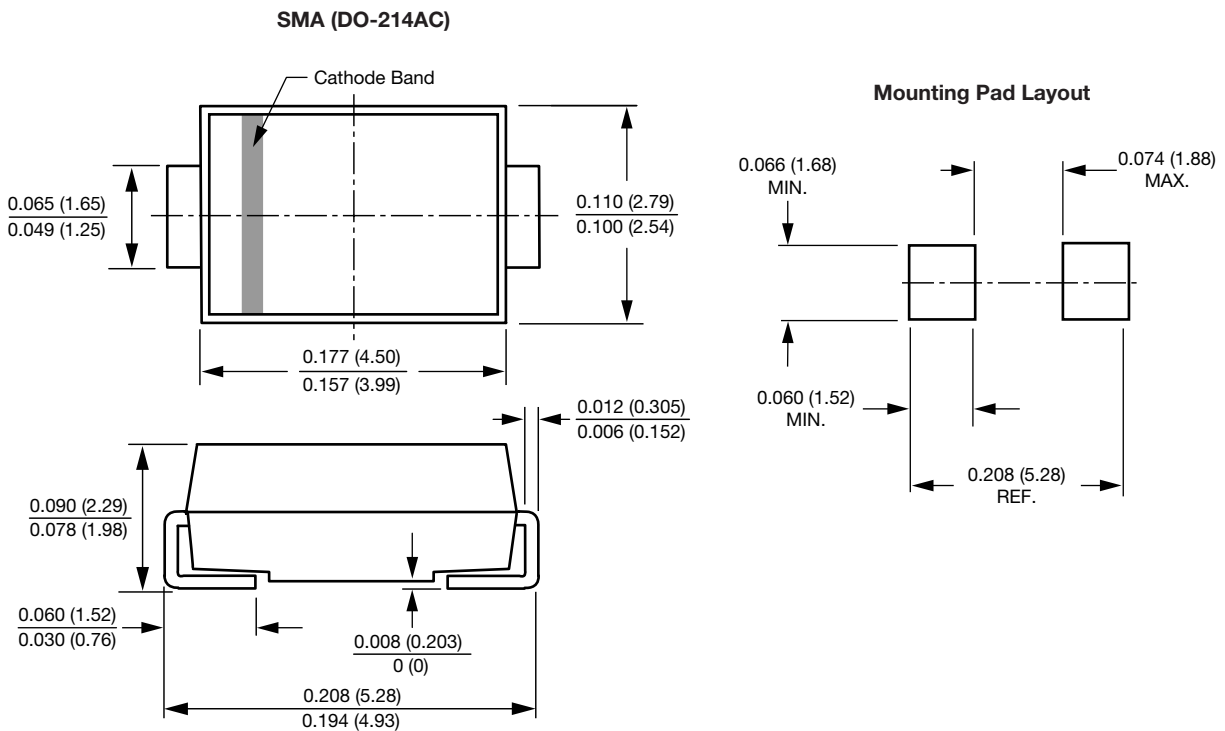


Fig. 5 - Typical Junction Capacitance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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