Vishay General Semiconductor

# Surface-Mount Schottky Barrier Rectifier



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SMA (DO-214AC)



## LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS					
I <sub>F(AV)</sub>	2.0 A				
V <sub>RRM</sub>	50 V, 60 V				
I <sub>FSM</sub>	40 A				
$V_F$ at $I_F$ = 2.0 A	0.53 V				
T <sub>J</sub> max.	150 °C				
Package	SMA (DO-214AC)				
Circuit configuration	Single				

### 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 <u>www.vishay.com/doc?99912</u>

### 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

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

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25 \text{ °C}$ unless otherwise noted)							
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT	
Maximum instantaneous forward voltage	I <sub>F</sub> = 1.0 A	T <sub>A</sub> = 25 °C	V <sub>F</sub> <sup>(1)</sup>	0.51	-	V	
	I <sub>F</sub> = 2.0 A			0.60	0.75		
	I <sub>F</sub> = 1.0 A	T <sub>A</sub> = 125 °C		0.43	-		
	I <sub>F</sub> = 2.0 A			0.53	0.62		
Maximum reverse current	Botod V	T <sub>A</sub> = 25 °C	I <sub>R</sub> <sup>(2)</sup>	-	200	μA	
	Rated V <sub>R</sub>	T <sub>A</sub> = 125 °C		1.5	10	mA	

#### Notes

 $^{(1)}\,$  Pulse test: 300  $\mu s$  pulse width, 1 % duty cycle

<sup>(2)</sup> Pulse test: Pulse width  $\leq$  40 ms

Revision: 15-May-2020 1 Document Number: 89410 For technical questions within your region: <u>DiodesAmericas@vishay.com</u>, <u>DiodesAsia@vishay.com</u>, <u>DiodesEurope@vishay.com</u> THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT <u>www.vishay.com/doc?91000</u>



COMPLIANT

HALOGEN

FREE



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<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25 \text{ °C}$ unless otherwise noted)					
PARAMETER	SYMBOL	SS25S SS26S		UNIT	
Typical thermal resistance	R <sub>0JA</sub> <sup>(1)</sup>	100		°C/W	
	R <sub>θJL</sub> <sup>(1)</sup>	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<sub>A</sub> = 25 °C unless otherwise noted)

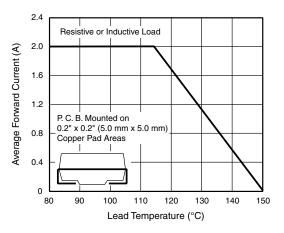


Fig. 1 - Forward Current Derating Curve

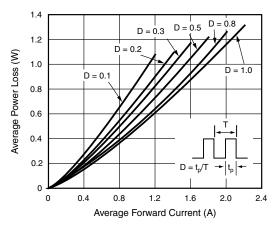


Fig. 2 - Forward Power Loss Characteristics

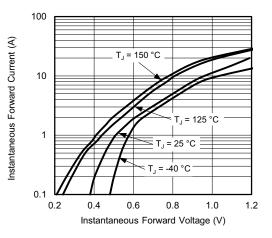
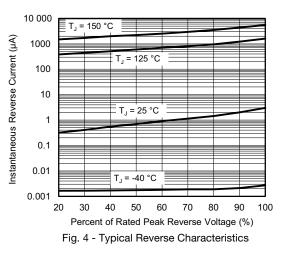


Fig. 3 - Typical Instantaneous Forward Characteristics





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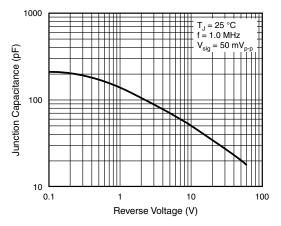
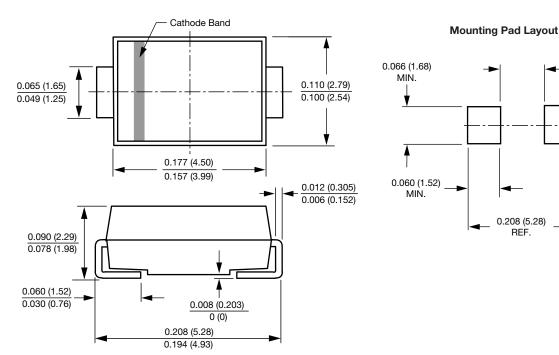


Fig. 5 - Typical Junction Capacitance

### **PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)



### SMA (DO-214AC)

0.074 (1.88)

MAX.

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