

Vishay General Semiconductor

Surface Mount Schottky Barrier Rectifier



DO-214AC (SMA)

PRIMARY CHARACTERISTICS				
I _{F(AV)}	2.0 A			
V_{RRM}	20 V to 60 V			
I _{FSM}	40 A			
V _F at I _F = 2.0 A	0.53 V			
T _J max.	150 °C			

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
- AEC-Q101 qualified
- Material categorization: For definitions of compliance please see <u>www.vishav.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: DO-214AC (SMA)

Molding compound meets UL 94 V-0 flammability rating Base P/N-E3 - RoHS-compliant, commercial grade Base P/NHE3 - RoHS-compliant, AEC-Q101 qualified Base P/NHE3_X - RoHS-compliant and AEC-Q101 qualified ("_X" denotes revision code e.g. A, B,)

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

E3 suffix meets JESD 201 class 1A whisker test, HE3 suffix meets JESD 201 class 2 whisker test

Polarity: Color band denotes the cathode end

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	MBOL SS25S SS26S		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		А	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	40		А	
Operating junction temperature range	T _J , T _{STG}	- 55 to + 150		°C	



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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT
Maximum instantaneous forward voltage (1)	$I_F = 1.0 \text{ A}$ $I_F = 2.0 \text{ A}$	- T _A = 25 °C	V _F	0.51	-	V
	I _F = 2.0 A			0.60	0.75	
	I _F = 1.0 A	T _A = 125 °C		0.43	-	
	I _F = 2.0 A			0.53	0.62	
Maximum reverse current (2)	Rated V _R	T _A = 25 °C T _A = 125 °C	T _A = 25 °C	-	200	μA
	nateu v _R		I _R	1.5	10	mA

Notes

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

(2) Pulse test: Pulse width ≤ 40 ms

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL SS25S SS26S UNIT				
Typical thermal resistance (1)	$R_{\theta JA}$	100		°C/W	
	$R_{ heta JL}$	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-E3/61T	0.064	61T	1800	7" diameter plastic tape and reel		
SS26S-E3/5AT	0.064	5AT	7500	13" diameter plastic tape and reel		
SS26SHE3/61T (1)	0.064	61T	1800	7" diameter plastic tape and reel		
SS26SHE3/5AT (1)	0.064	5AT	7500	13" diameter plastic tape and reel		
SS26SHE3_A/H (1)	0.064	Н	1800	7" diameter plastic tape and reel		
SS26SHE3_A/I (1)	0.064	I	7500	13" diameter plastic tape and reel		

Note

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

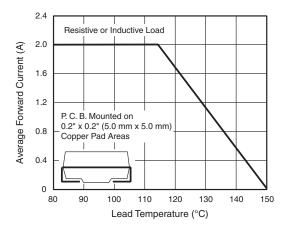


Fig. 1 - Forward Current Derating Curve

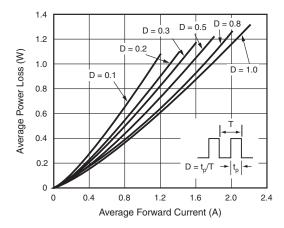


Fig. 2 - Forward Power Loss Characteristics

⁽¹⁾ AEC-Q101 qualified



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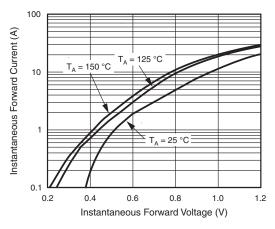


Fig. 3 - Typical Instantaneous Forward Characteristics

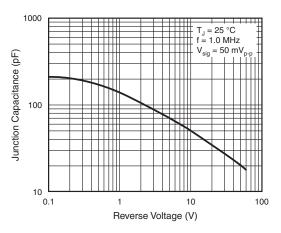


Fig. 5 - Typical Junction Capacitance

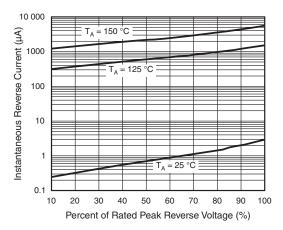
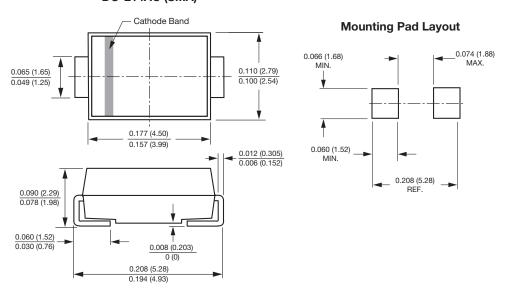


Fig. 4 - Typical Reverse Characteristics

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





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