

Surface Mount Schottky Barrier Rectifier



DO-214AC (SMA)

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 www.vishay.com/doc?99912



RoHS
COMPLIANT

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

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

MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise noted)				
PARAMETER	SYMBOL	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		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 ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)					
PARAMETER	TEST CONDITIONS	SYMBOL	TYP.	MAX.	UNIT
Maximum instantaneous forward voltage ⁽¹⁾	$I_F = 1.0\text{ A}$	$T_A = 25\text{ }^{\circ}\text{C}$	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 ⁽²⁾	Rated V_R	$T_A = 25\text{ }^{\circ}\text{C}$	-	200	μA
		$T_A = 125\text{ }^{\circ}\text{C}$	1.5	10	mA

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

⁽²⁾ Pulse test: Pulse width $\leq 40\text{ ms}$

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)				
PARAMETER	SYMBOL	SS25S	SS26S	UNIT
Typical thermal resistance ⁽¹⁾	R _{θJA}	100		°C/W
	R _{θJL}	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	H	1800	7" diameter plastic tape and reel
SS26SHE3_A/I ⁽¹⁾	0.064	I	7500	13" diameter plastic tape and reel

Note
⁽¹⁾ AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

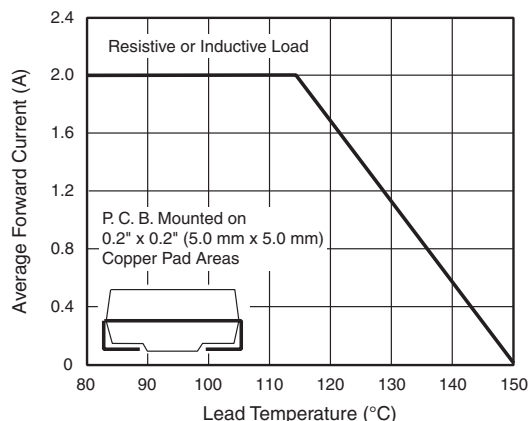
($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)


Fig. 1 - Forward Current Derating Curve

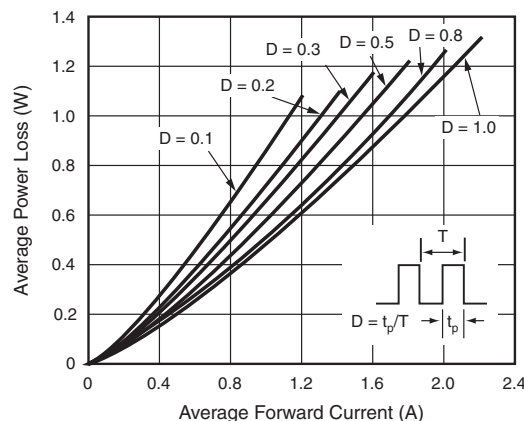


Fig. 2 - Forward Power Loss Characteristics

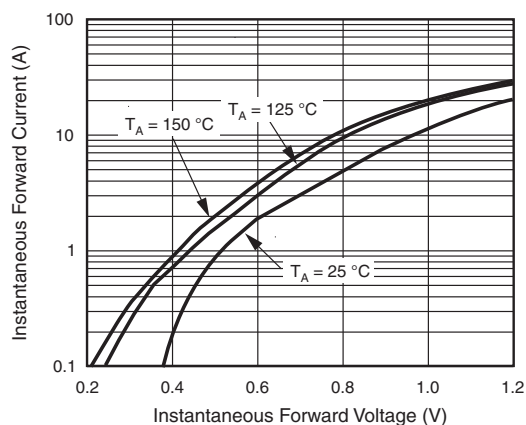


Fig. 3 - Typical Instantaneous Forward Characteristics

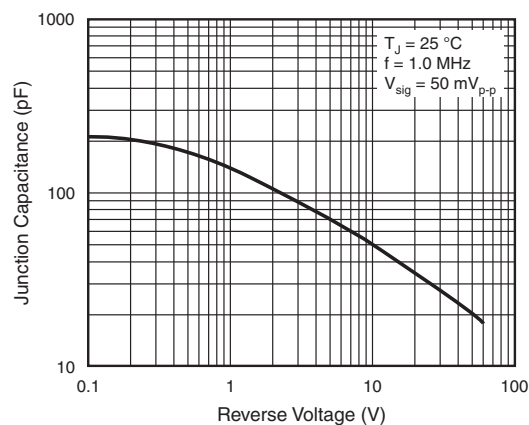


Fig. 5 - Typical Junction Capacitance

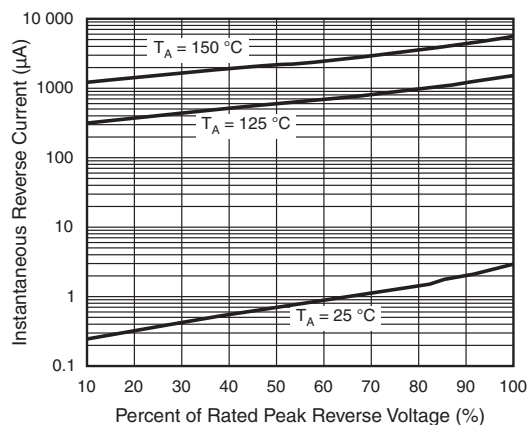
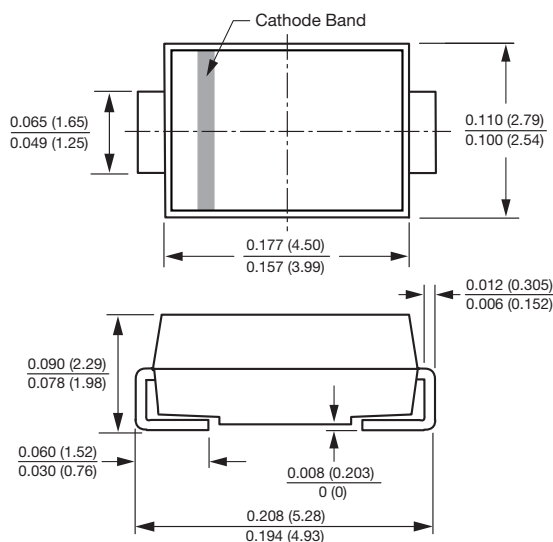
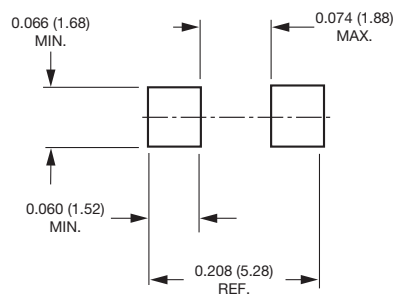


Fig. 4 - Typical Reverse Characteristics

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



Mounting Pad Layout





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