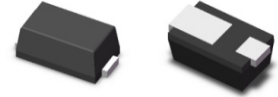


## Features

- Low power loss, high efficiency
- Low profile - typical height of 0.65 mm
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



SOD-323HE

## Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Values	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	200	V
Maximum RMS Voltage	V <sub>RMS</sub>	140	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	0.5	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load	I <sub>FSM</sub>	15	A
Operating Junction Temperature Range	T <sub>J</sub>	-55 To +175	°C
Storage Temperature Range	T <sub>STG</sub>	-55 To +175	°C

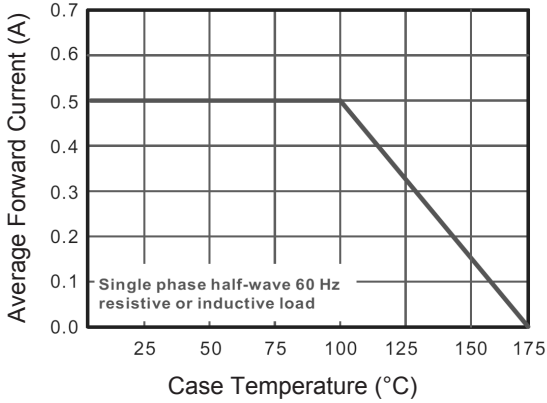
## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Test Conditions	Symbol	Values	Unit
Maximum Instantaneous Forward Voltage	I <sub>F</sub> =0.5A	V <sub>F</sub>	0.95	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T <sub>A</sub> =25°C	I <sub>R</sub>	0.2	mA
	T <sub>A</sub> =100°C		15	
Typical Junction Capacitance	4.0V, 1 MHz	C <sub>J</sub>	40	pF
Typical Thermal Resistance <sup>1</sup>	Junction to Ambient	R <sub>θJA</sub>	150	°C/W
	Junction to Lead	R <sub>θJL</sub>	10	

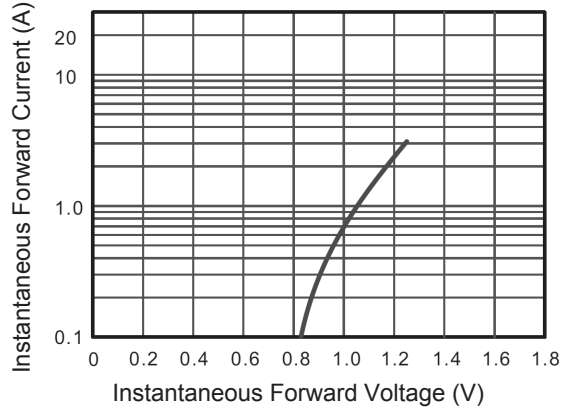
Note:

1. The thermal resistance from Junction to Ambient or Junction to Lead, mounted on P.C.B with 4×4mm copper pads, 2 OZ, FR4 PCB

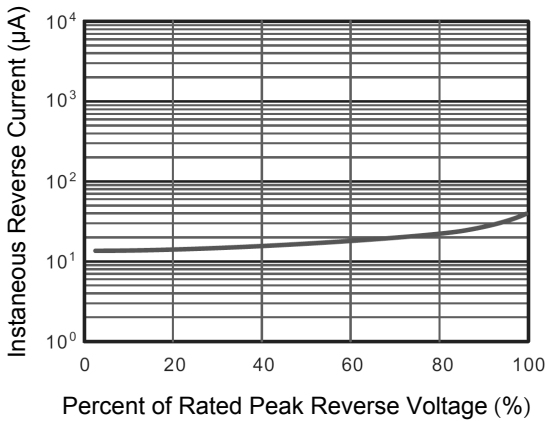
## Ratings and Characteristics Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)



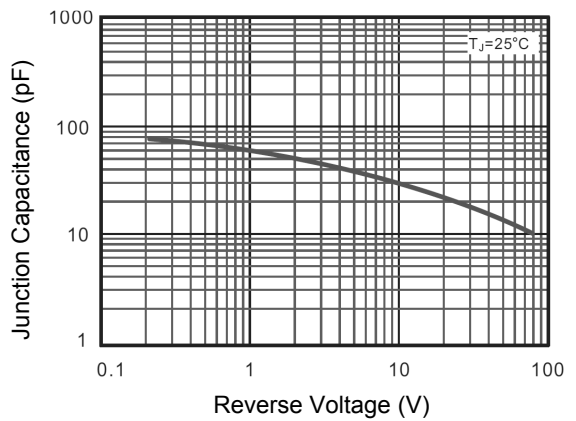
**Figure 1. Forward Current Derating Curve**



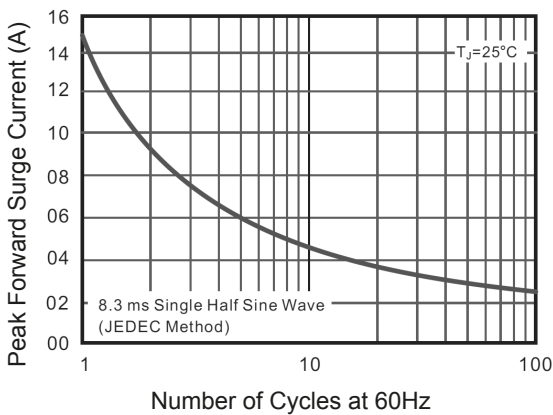
**Figure 2. Typical Instantaneous Forward Characteristics**



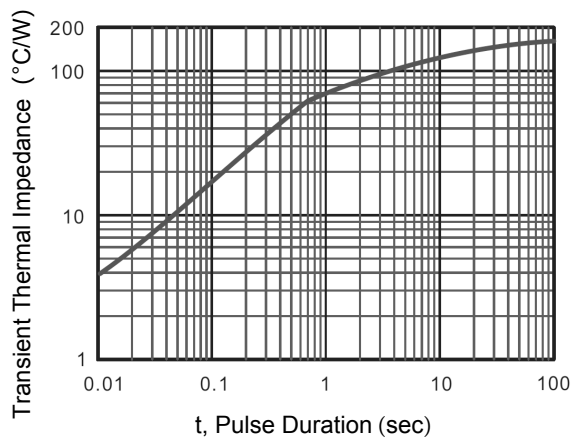
**Figure 3. Typical Reverse Characteristics**



**Figure 4. Typical Junction Capacitance**

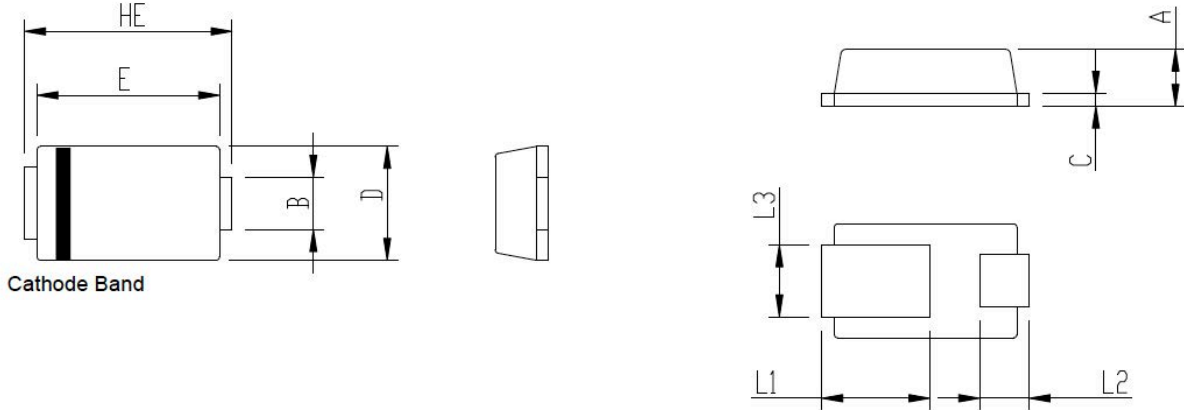


**Figure 5. Maximum Non-Repetitive Peak Forward Surge Current**



**Figure 6. Typical Transient Thermal Impedance**

## Package Outline Dimensions (SOD-323HE)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.550	0.750	0.022	0.030
B	0.450	0.750	0.018	0.030
C	0.100	0.250	0.004	0.010
D	1.250	1.450	0.049	0.057
E	2.100	2.300	0.083	0.091
HE	2.300	2.700	0.091	0.106
L1	1.100	1.550	0.043	0.061
L2	0.250	0.500	0.010	0.020
L3	0.650	0.950	0.026	0.037

## Recommended Pad Layout

