

## Maximum Ratings (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

or, Capacitive Load, Average Current by 20%						
Characteristic	Symbol	B320AE	B330AE	B340AE	B345AE	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	20	30	40	45	V
Working Peak Reverse Voltage	V <sub>RWM</sub>					
DC Blocking Voltage	V <sub>RM</sub>					
Average Rectified Output Current	I <sub>O</sub>	3				A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	80				A

## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Ambient (Note 6)	R <sub>θJA</sub>	60	°C/W
Typical Thermal Resistance Junction to Case (Note 6)	R <sub>θJC</sub>	30	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

## Electrical Characteristics (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V <sub>F</sub>	—	0.45 0.40	0.50 —	V	I <sub>F</sub> = 3A, T <sub>J</sub> = +25°C I <sub>F</sub> = 3A, T <sub>J</sub> = +125°C
Leakage Current (Note 7)	I <sub>R</sub>	—	— — — — 35	0.10 0.15 0.20 0.30 —	mA	V <sub>R</sub> = 20V, T <sub>J</sub> = +25°C V <sub>R</sub> = 30V, T <sub>J</sub> = +25°C V <sub>R</sub> = 40V, T <sub>J</sub> = +25°C V <sub>R</sub> = 45V, T <sub>J</sub> = +25°C V <sub>R</sub> = 45V, T <sub>J</sub> = +125°C
Typical Capacitance	C <sub>T</sub>	—	140	—	pF	V <sub>R</sub> = 4.0V, f = 1MHz

Notes: 6. Device mounted on FR-4 substrate, 1"×1", 2oz, single-sided, PC boards with 0.56"×0.73" copper pad.  
7. Short duration pulse test used to minimize self-heating effect.

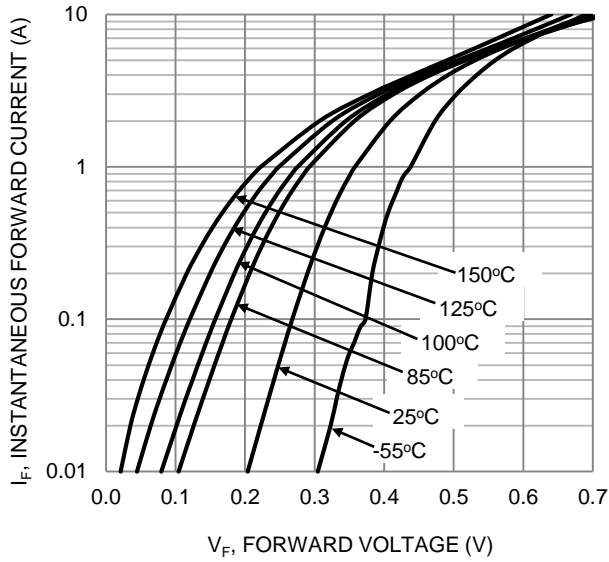


Figure 1. Typical Forward Characteristics

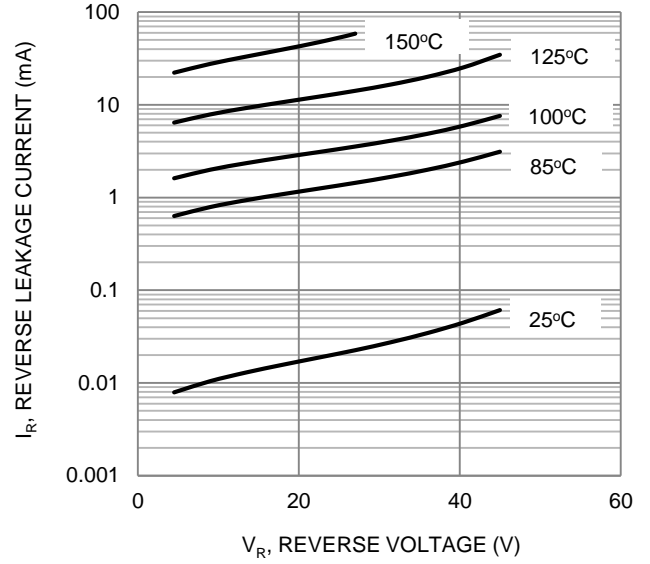


Figure 2. Typical Reverse Characteristics

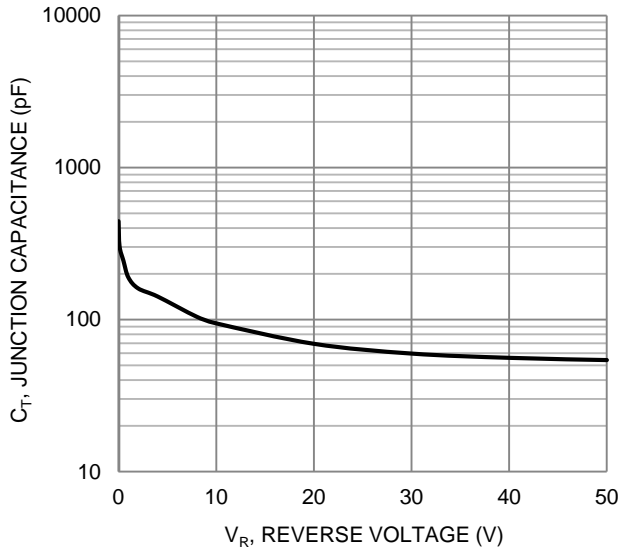


Figure 3. Typical Junction Capacitance

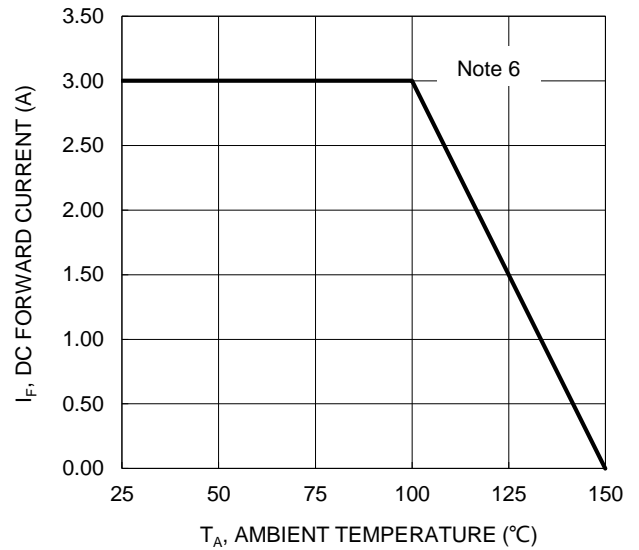
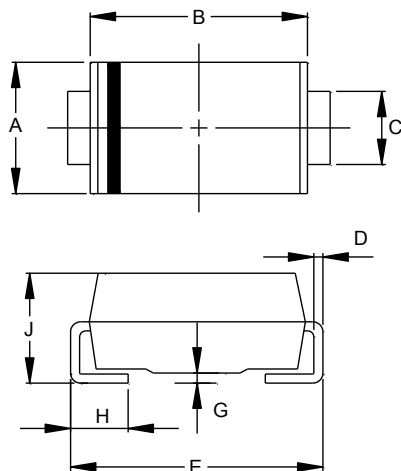


Figure 4. DC Forward Current Derating

## Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

### SMA

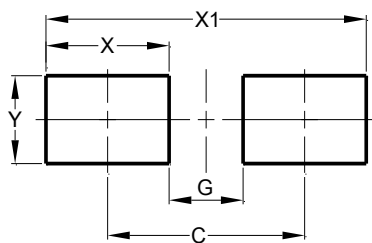


SMA		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.05	0.20
H	0.76	1.52
J	1.96	2.40
All Dimensions in mm		

## Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

### SMA



Dimensions	Value (in mm)
C	4.00
G	1.50
X	2.50
X1	6.50
Y	1.70

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