

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	40	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
Average Forward Current (See also Figure 5)	I _{F(AV)}	1.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	22	A

Thermal Characteristics

Characteristic	Symbol	Typ	Max	Unit
Thermal Resistance Junction to Soldering Point	R _{θJS}	—	15	°C/W
Thermal Resistance Junction to Ambient Air (Note 5)	R _{θJA}	175	—	°C/W
Thermal Resistance Junction to Ambient Air (Note 6)	R _{θJA}	130	—	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150		°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 7)	V _{(BR)R}	40	—	—	V	I _R = 100μA
Forward Voltage	V _F	—	0.37	0.42	V	I _F = 0.1A
		—	0.44	0.50		I _F = 0.5A
		—	0.46	0.52		I _F = 0.7A
		—	0.49	0.55		I _F = 1.0A
Leakage Current (Note 7)	I _R	—	0.3	4	μA	V _R = 5V, T _A = +25°C
		—	2	50		V _R = 40V, T _A = +25°C
Total Capacitance (See also Figure 4)	C _T	—	32	—	pF	V _R = 10V, f = 1.0MHz

Notes: 5. FR-4 PCB, 2 oz. copper, minimum recommended pad layout per <http://www.diodes.com/package-outlines.html>. T_A = +25°C.
6. Polyimide PCB, 2 oz. copper, minimum recommended pad layout per <http://www.diodes.com/package-outlines.html>. T_A = +25°C.
7. Short duration pulse test used to minimize self-heating effect.

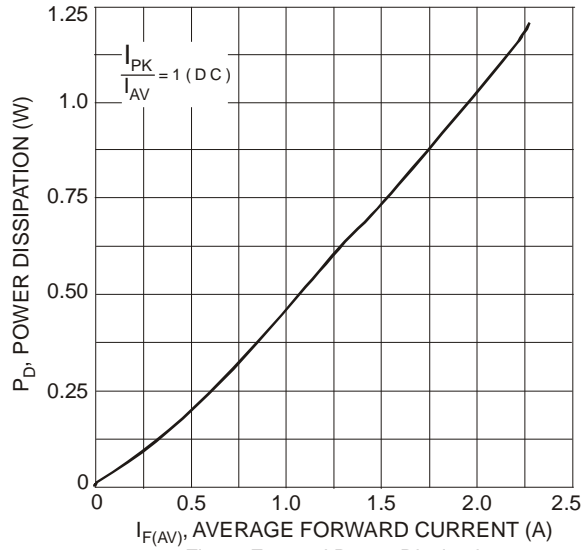


Fig. 1 Forward Power Dissipation

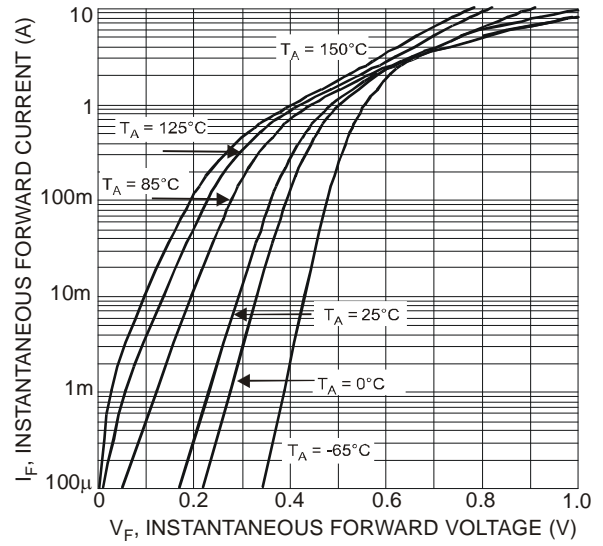


Fig. 2 Typical Forward Characteristics

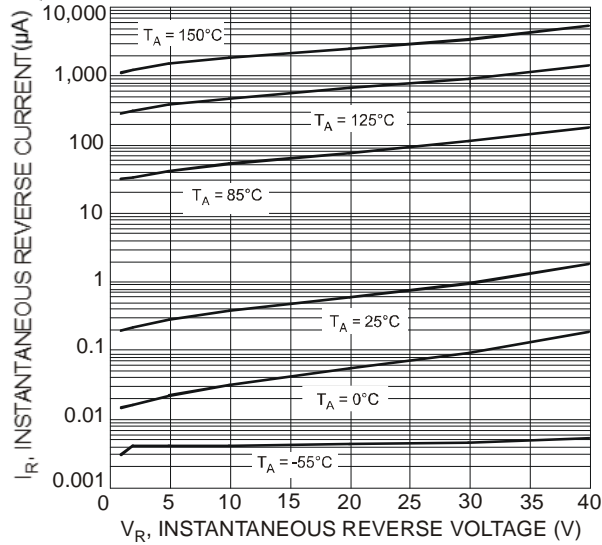


Fig. 3 Typical Reverse Characteristics

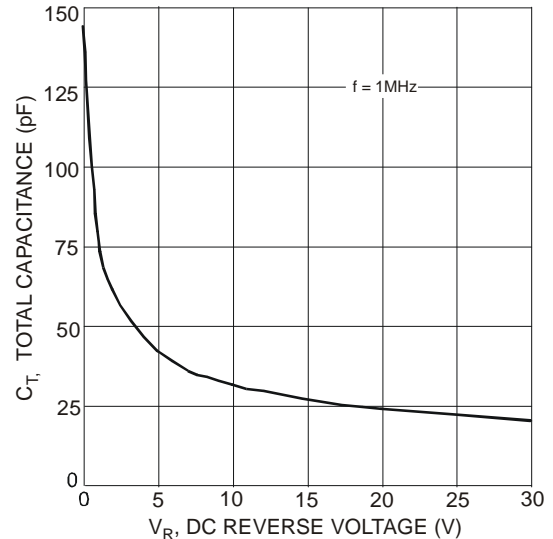


Fig. 4 Total Capacitance vs. Reverse Voltage

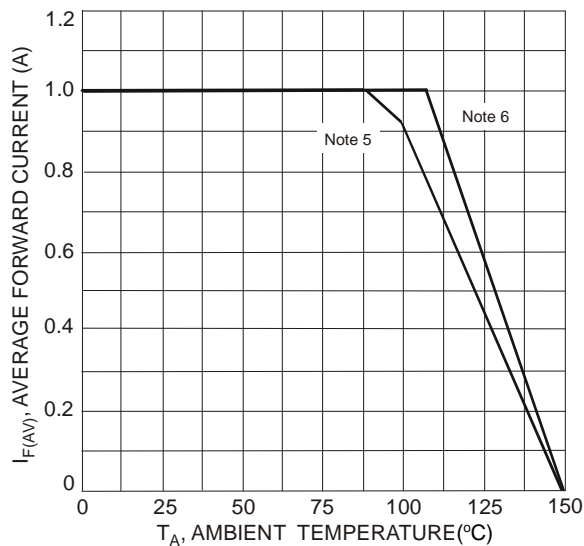


Fig. 5 Forward Current Derating Curve

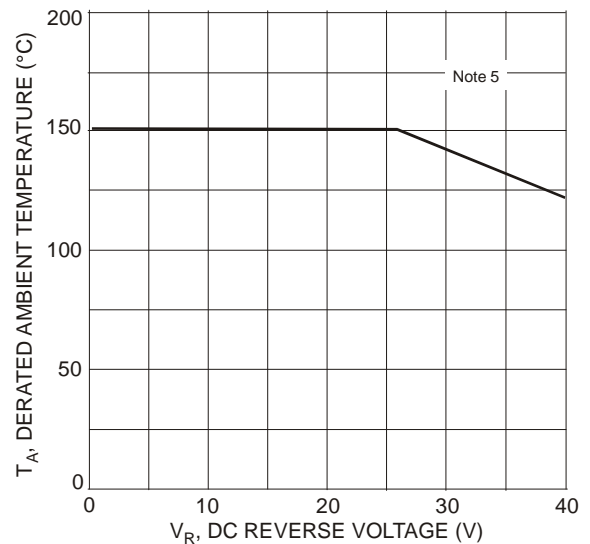
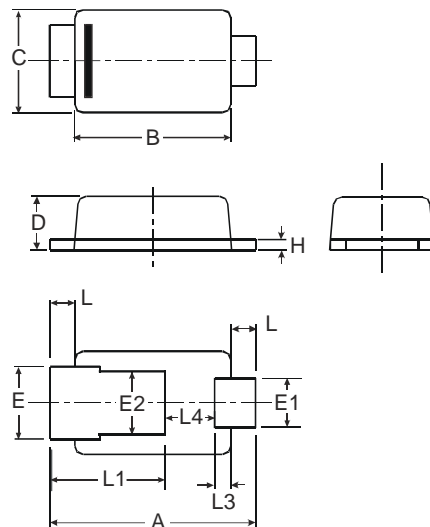


Fig. 6 Operating Temperature Derating

Package Outline Dimensions

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

PowerDI323

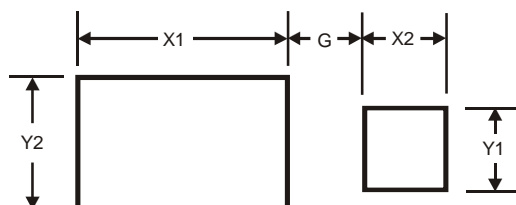


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Dim	Min	Max	Typ
A	2.40	2.60	2.50
B	1.85	1.95	1.90
C	1.20	1.30	1.25
D	0.60	0.70	0.65
E	0.78	0.98	0.88
E1	0.50	0.70	0.60
E2	0.60	1.00	0.80
H	0.08	0.18	0.13
L	0.20	0.40	0.30
L1	-	-	1.40
L3	-	-	0.20
L4	0.40	0.80	0.60
All Dimensions in mm			

Suggested Pad Layout

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

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Dimensions	Value (in mm)
G	0.5
X1	2.0
X2	0.8
Y1	0.8
Y2	1.1

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