

Maximum Ratings (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

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

Characteristic	Symbol	B120/B	B130/B	B140/B	B150/B	B160/B	Unit
Peak Repetitive Reverse Voltage	V_{RRM}						
Working Peak Reverse Voltage	V_{RWM}	20	30	40	50	60	V
DC Blocking Voltage	V_R						
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	V
Average Rectified Output Current @ $T_T = +130^\circ\text{C}$	I_O	1.0					A
Non-Repetitive Peak Forward Surge Current 8.3ms							
Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	30					A

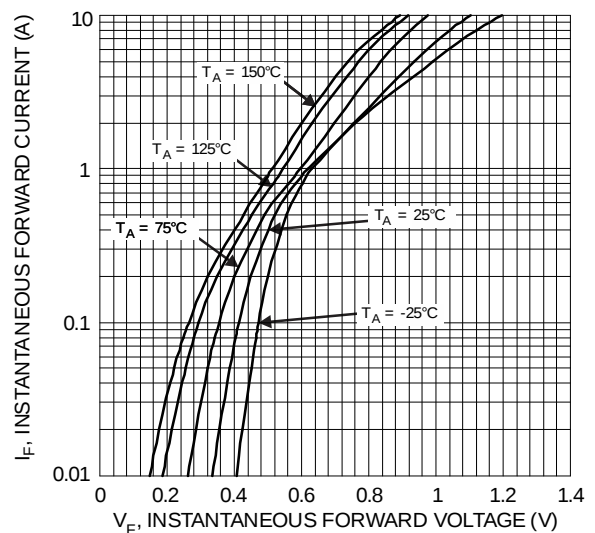
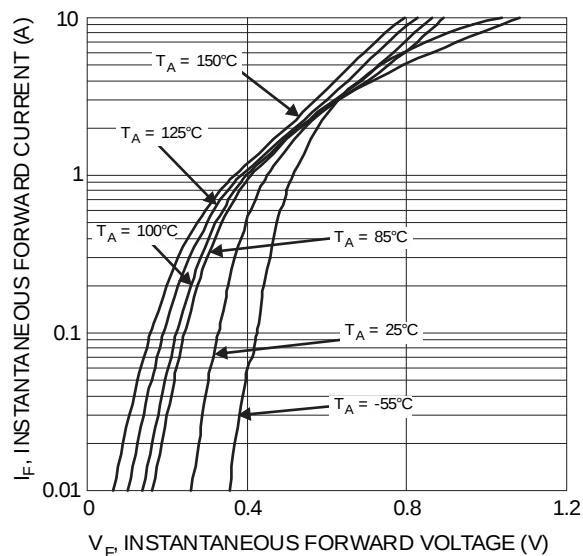
Thermal Characteristics

Characteristic	Symbol	B120/B	B130/B	B140/B	B150/B	B160/B	Unit
Typical Thermal Resistance Junction to Terminal (Note 5)	$R_{\theta JT}$	20					$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150					$^\circ\text{C}$

Electrical Characteristics (@ $T_A = +25^\circ\text{C}$, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop B120/B, B130/B, B140/B B150/B, B160/B	V_F	-	-	0.5 0.7	V	$I_F = 1.0\text{A}$ $I_F = 1.0\text{A}$
Leakage Current (Note 6)	I_R	-	-	0.5 10	mA	@ Rated V_R , $T_A = +25^\circ\text{C}$ @ Rated V_R , $T_A = +100^\circ\text{C}$
Total Capacitance	C_T	-	-	110	pF	$V_R = 4\text{V}$, $f = 1\text{MHz}$

Notes: 5. Thermal Resistance: Junction to terminal, unit mounted on PC board with 5.0 mm² (0.013 mm thick) copper pads as heat sink.
 6. Short duration pulse test used to minimize self-heating effect.



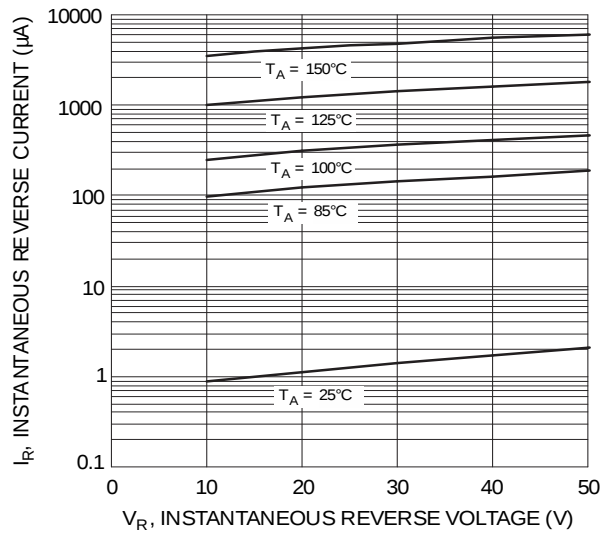


Figure 3 Typical Reverse Characteristics
B120/B through B140/B

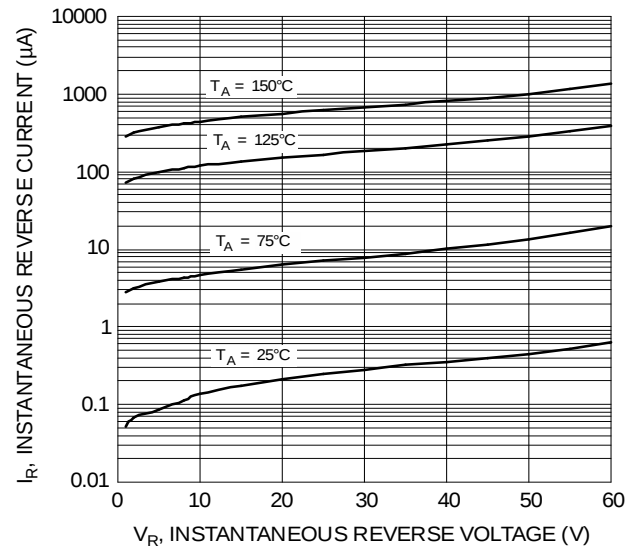


Figure 4 Typical Reverse Characteristics
B150/B through B160/B

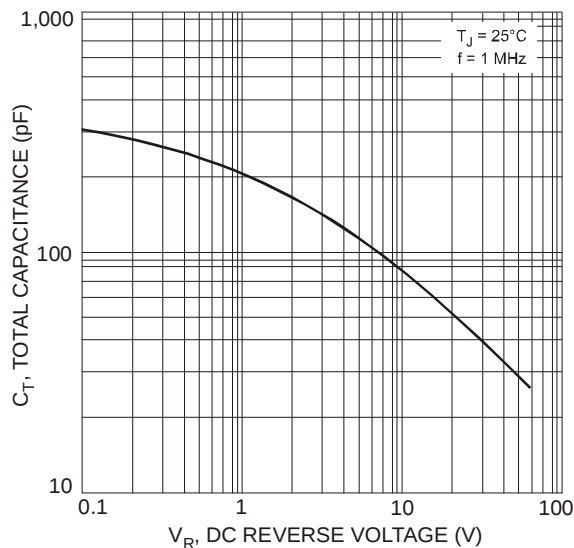


Fig. 5 Total Capacitance vs. Reverse Voltage

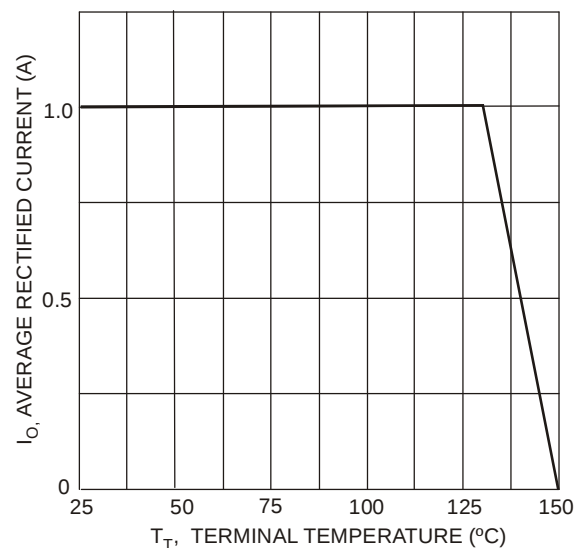


Fig. 6 Forward Current Derating Curve

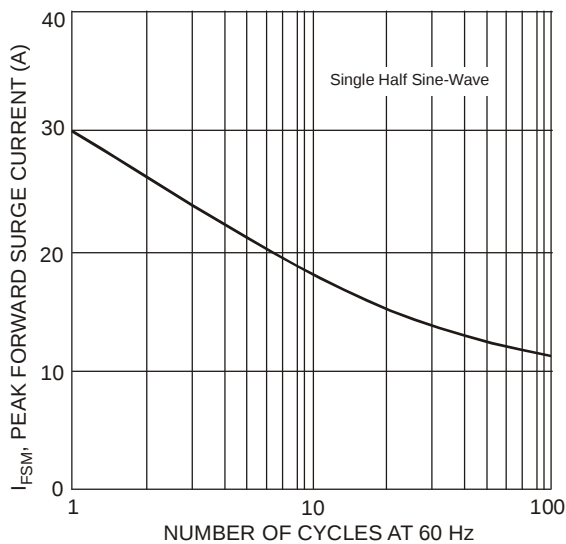
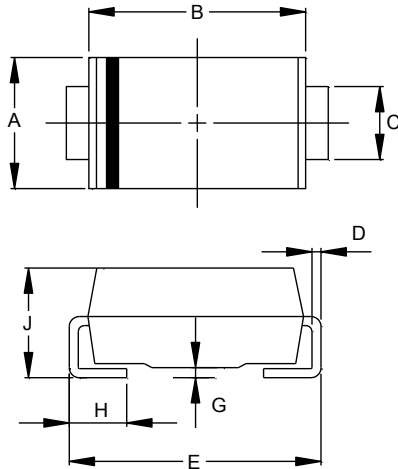


Fig. 7 Max Non-Repetitive Peak Forward Surge Current

Package Outline Dimensions

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

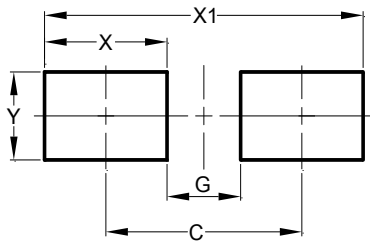


SMA		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.05	0.20
H	0.76	1.52
J	1.96	2.40
All Dimensions in mm		

SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.05	0.20
H	0.76	1.52
J	2.00	2.50
All Dimensions in mm		

Suggested Pad Layout

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



Dimensions	SMA (in mm)	SMB (in mm)
C	4.00	4.30
G	1.50	1.80
X	2.50	2.50
X1	6.50	6.80
Y	1.70	2.30

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