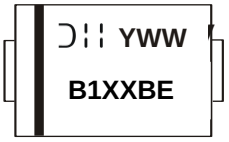
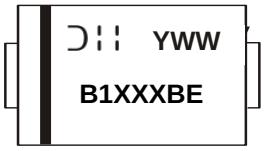
Marking Information (continued)

SMB





B1XXBE or B1XXXBE = Product Type Marking Code, ex: B170BE (SMB Package)
= Manufacturers' Code Marking
YWW = Date Code Marking
Y = Last Digit of Year (ex: 9 for 2019)
WW = Week Code (01 to 53)

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	B170AE B170BE	B180AE B180BE	B190AE B190BE	B1100AE B1100BE	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	70	80	90	100	V
Average Rectified Output Current	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	Value	Unit
Typical Thermal Resistance, Junction to Ambient (Note 5)	SMA SMB	$R_{\theta JA}$	110 75	°C/W
Typical Thermal Resistance, Junction to Case (Note 5)	SMA SMB	$R_{\theta JC}$	55 40	°C/W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 to +150	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V_F	— —	0.75 0.61	0.79 —	V	I_F = 1.0A, T_A = +25°C I_F = 1.0A, T_A = +125°C
Leakage Current (Note 6)	I_R	— —	— —	0.2 5.0	mA	@ Rated V_R, T_A = +25°C @ Rated V_R, T_A = +125°C
Typical Capacitance	C_T	—	27	—	pF	V_R = 4V, f = 1MHz

Notes: 5. Device mounted on FR-4 substrate, 0.4" x 0.5", 2oz, single-sided, PC boards with 0.2" x 0.25" copper pad.
6. Short duration pulse test used to minimize self-heating effect.

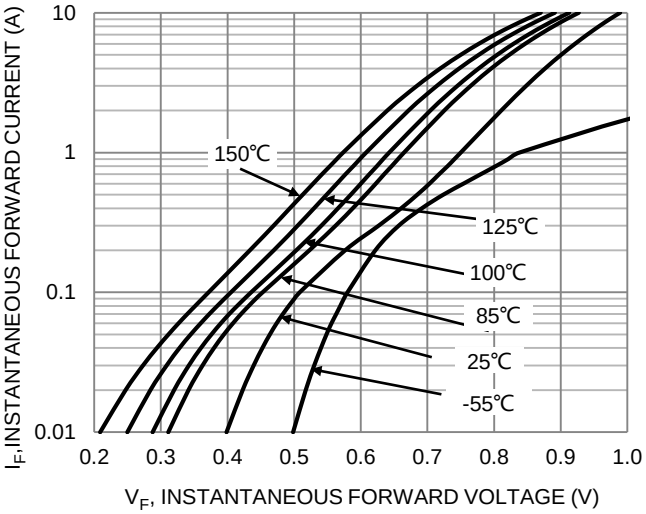


Figure 1. Typical Forward Characteristics

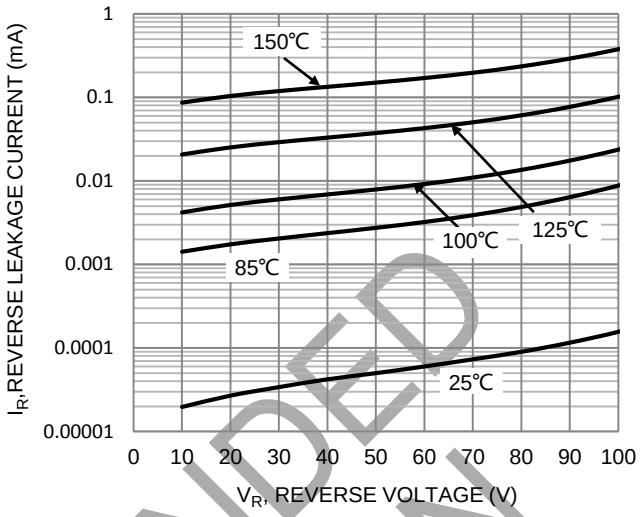


Figure 2. Typical Reverse Characteristics

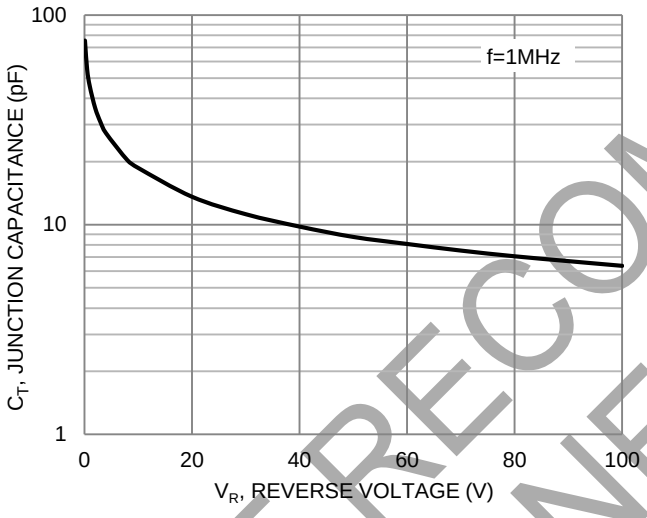


Figure 3. Typical Junction Capacitance

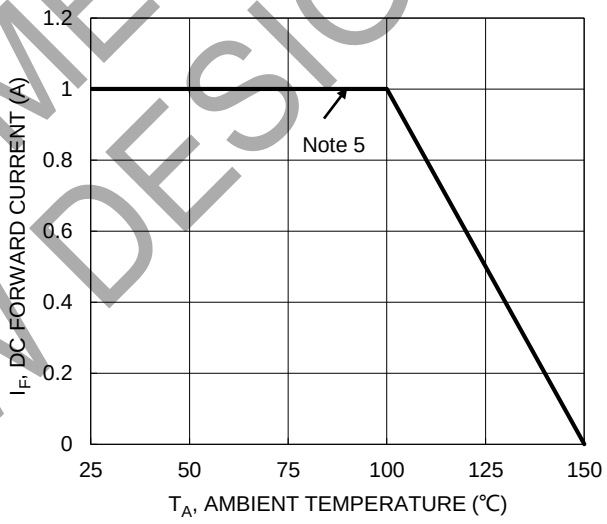
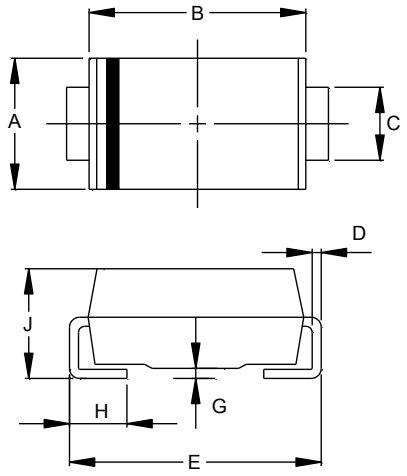


Figure 4. DC Forward Current Derating

Package Outline Dimensions

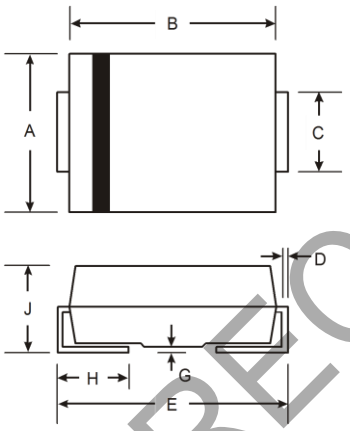
Please see http://www.diodes.com/package-outlines.html for the latest version.

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		

SMB

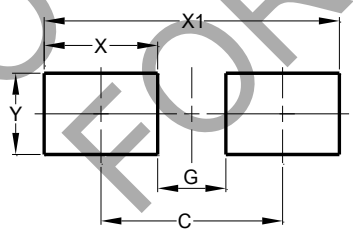


SMB		
Dim	**Min**	**Max**
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.05	0.20
H	0.76	1.52
J	2.00	2.50
All Dimensions in mm		

Suggested Pad Layout

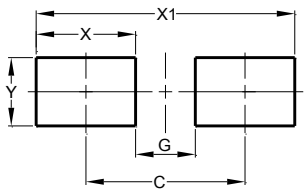
Please see http://www.diodes.com/package-outlines.html for the latest version.

SMA



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

SMB



Dimensions	Value (in mm)
C	4.30
G	1.80
X	2.50
X1	6.80
Y	2.30

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