

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

Characteristic	Symbol	BAV19W	BAV20W	BAV21W	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	120	200	250	V
Peak Repetitive Reverse Voltage	V_{RRM}	100	150	200	V
Working Peak Reverse Voltage	V_{RWM}				
DC Blocking Voltage	V_R				
RMS Reverse Voltage	$V_{R(RMS)}$	71	106	141	V
Forward Continuous Current (Note 5)	I_{FM}	400			mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	2.5			A
@ $t = 1.0\text{ms}$					
@ $t = 1.0\text{s}$	I_{FSM}	0.5			A
Repetitive Peak Forward Surge Current	I_{FRM}	625			mA

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 6)	P_D	250	mW
Thermal Resistance Junction to Ambient Air (Note 6)	$R_{\theta JA}$	500	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 7)	$V_{(BR)R}$	120	—	V	$I_R = 100\mu\text{A}$
BAV19W		200			
BAV20W		250			
Forward Voltage	V_{FM}	—	1.0 1.25	V	$I_F = 100\text{mA}$ $I_F = 200\text{mA}$
Peak Reverse Current	I_{RM}	—	100 15	nA	$T_J = +25^\circ\text{C}$
@ Rated DC Blocking Voltage (Note 7)				μA	$T_J = +100^\circ\text{C}$
Total Capacitance	C_T	—	5.0	pF	$V_R = 0, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{RR}	—	50	ns	$I_F = I_R = 30\text{mA}$, $I_{RR} = 0.1 \times I_R, R_L = 100\text{W}$

- Notes:
- I_{FM} is valid provided that terminals are kept at ambient temperature.
 - Part mounted on FR-4 PC board with minimum recommended pad layout, which can be found on our website at <http://www.diodes.com/package-outlines.html>.
 - Short duration pulse test used to minimize self-heating effect.

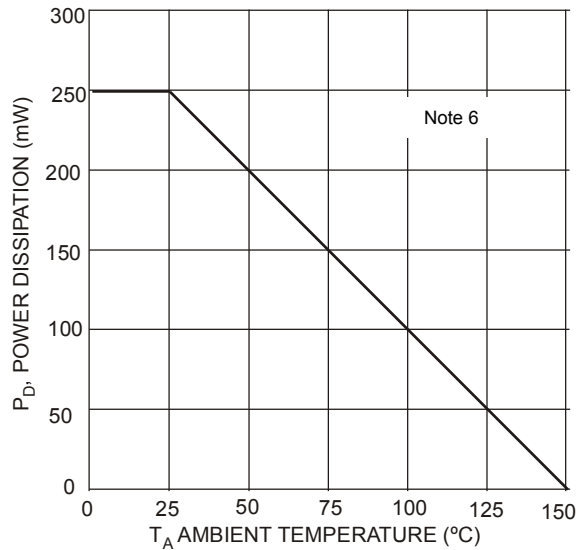


Fig. 1 Power Derating Curve

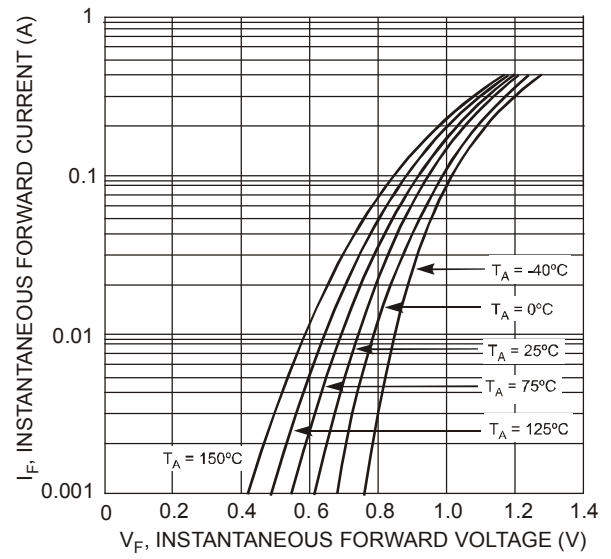


Fig. 2 Typical Forward Characteristics

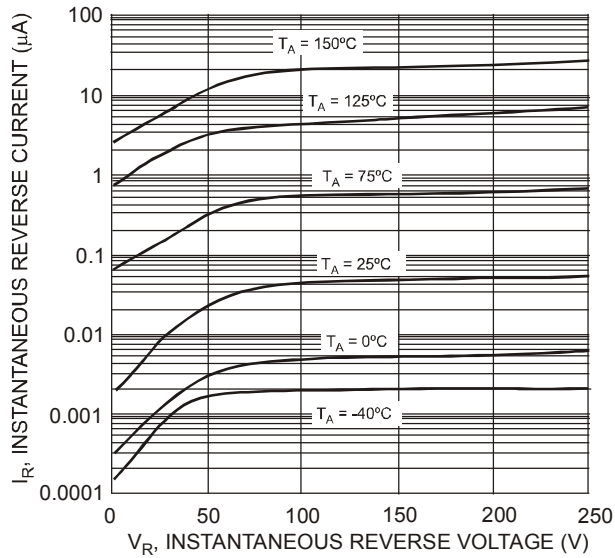


Fig. 3 Typical Reverse Characteristics

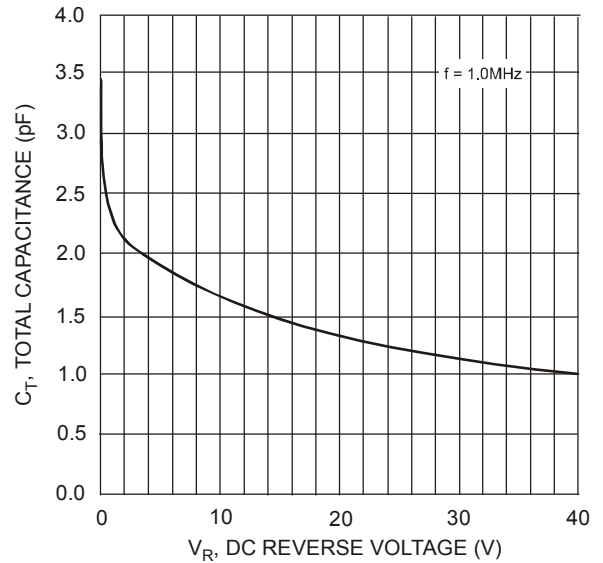
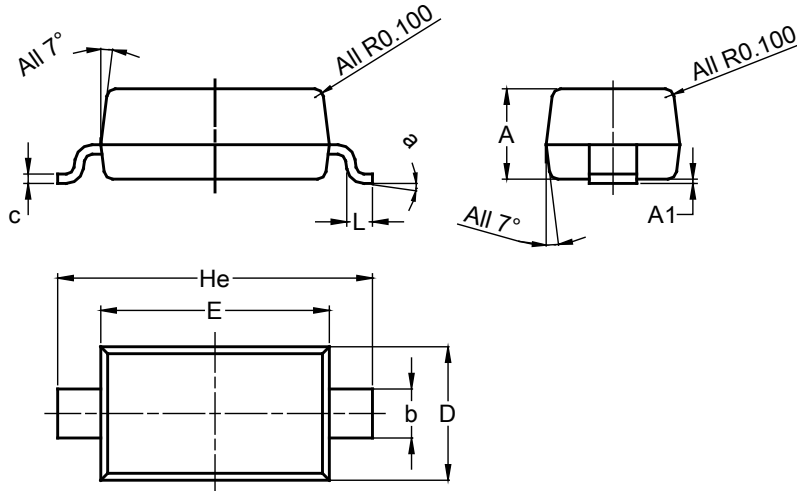


Fig. 4 Total Capacitance vs. Reverse Voltage

Package Outline Dimensions

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

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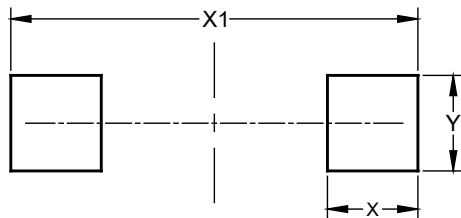


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Dim	Min	Max	Typ
A	1.00	1.35	1.05
A1	0.00	0.10	0.05
b	0.52	0.62	0.57
c	0.10	0.15	0.11
D	1.40	1.70	1.55
E	2.55	2.85	2.65
He	3.55	3.85	3.65
L	0.25	0.40	0.30
a	0°	8°	--
All Dimensions in mm			

Suggested Pad Layout

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

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Dimensions	Value (in mm)
X	0.900
X1	4.050
Y	0.950

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