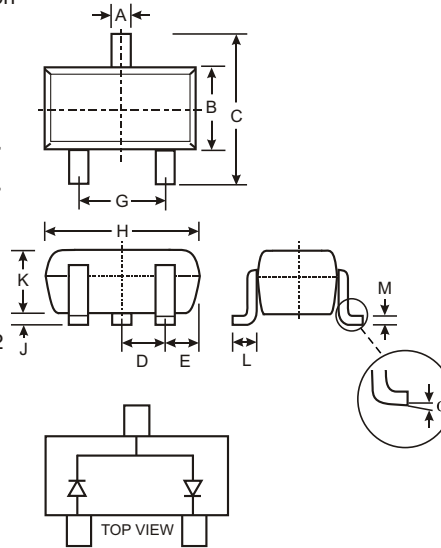


### Features

- Surface Mount Package Ideally Suited for Automatic Insertion
- Very Low Leakage Current
- Lead Free By Design/RoHS Compliant (Note 3)
- "Green Device" (Note 4)

### Mechanical Data

- Case: SOT-323
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish Matte Tin Finish annealed over Alloy 42 leadframe. Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Marking: K52 & Date Code (See Page 2)
- Weight: 0.006 grams (approximate)



SOT-323		
Dim	Min	Max
A	0.25	0.40
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	0.0	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.18
	0	8
All Dimensions in mm		

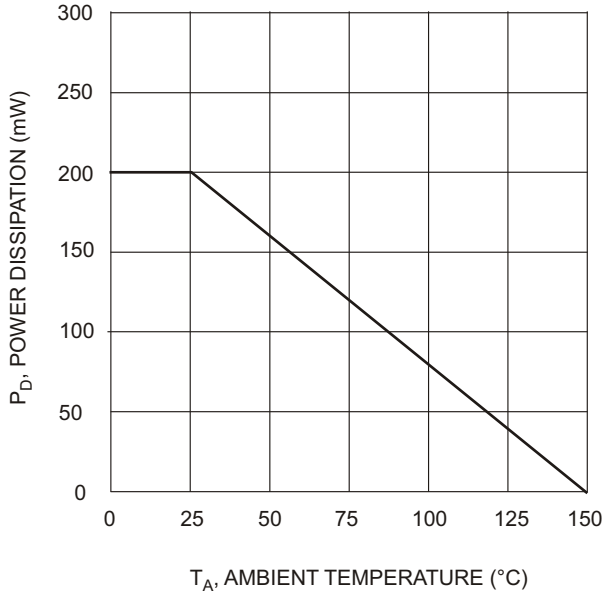
### Maximum Ratings @ T<sub>A</sub> = 25 C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	85	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	60	V
Forward Continuous Current (Note 2)	I <sub>FM</sub>	160	mA
		140	
Repetitive Peak Forward Current (Note 2)	I <sub>FRM</sub>	500	mA
Non-Repetitive Peak Forward Surge Current	I <sub>FSM</sub>	4.0	A
@ t = 1.0 s		1.0	
@ t = 1.0ms		0.5	
Power Dissipation (Note 2)	P <sub>d</sub>	200	mW
Thermal Resistance Junction to Ambient Air (Note 2)	R <sub>JA</sub>	625	C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	C

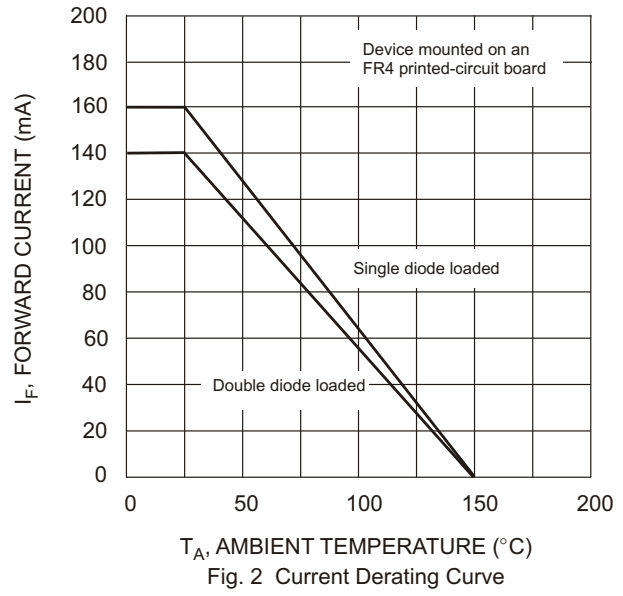
### Electrical Characteristics @ T<sub>A</sub> = 25 C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	V <sub>(BR)R</sub>	85			V	I <sub>R</sub> = 100 A
Forward Voltage	V <sub>F</sub>			0.90 1.0 1.1 1.25	V	I <sub>F</sub> = 1.0mA I <sub>F</sub> = 10mA I <sub>F</sub> = 50mA I <sub>F</sub> = 150mA
Leakage Current (Note 1)	I <sub>R</sub>			5.0 80	nA nA	V <sub>R</sub> = 75V V <sub>R</sub> = 75V, T <sub>J</sub> = 150 C
Total Capacitance	C <sub>T</sub>		2		pF	V <sub>R</sub> = 0, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>			3.0	s	I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>rr</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100

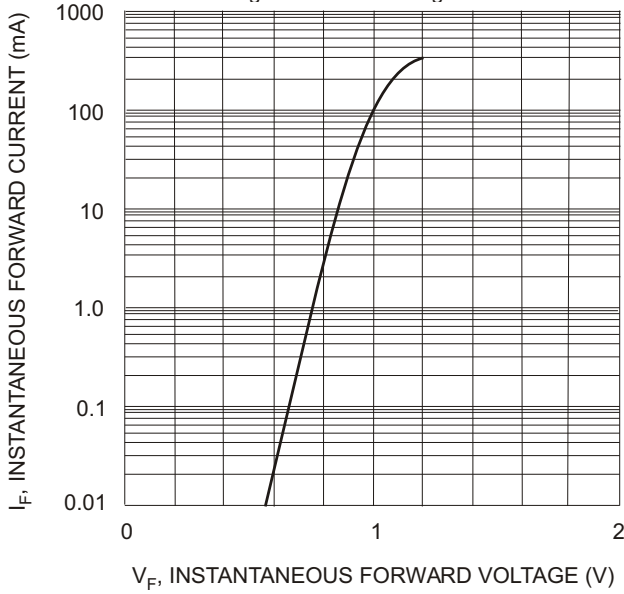
- Notes:
- Short duration test pulse to minimize self-heating effect.
  - Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  - No purposefully added lead.
  - Diodes Inc.'s "Green" policy can be found on our website at [http://www.diodes.com/products/lead\\_free/index.php](http://www.diodes.com/products/lead_free/index.php).



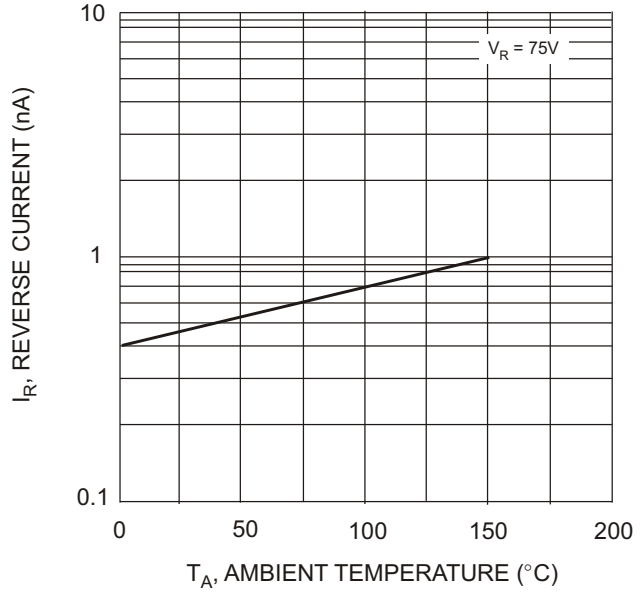
$T_A$ , AMBIENT TEMPERATURE (°C)  
Fig. 1 Power Derating Curve



$T_A$ , AMBIENT TEMPERATURE (°C)  
Fig. 2 Current Derating Curve



$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 3 Typical Forward Characteristics



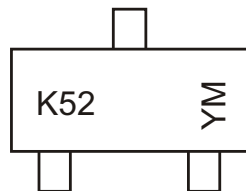
$T_A$ , AMBIENT TEMPERATURE (°C)  
Fig. 4 Typical Reverse Characteristics

**Ordering Information** (Note 5)

Device	Packaging	Shipping
BAV199W-7	SOT-323	3000/Tape & Reel

Notes: 5. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

**Marking Information**



K52 = Product Type Marking Code  
YM = Date Code Marking  
Y = Year ex: T = 2006  
M = Month ex: 9 = September

Date Code Key

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012			
Code	R	S	T	U	V	W	X	Y	Z			
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

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