



BAW156

DUAL SURFACE MOUNT LOW LEAKAGE DIODE

Features

Surface Mount Package Ideally Suited for Automatic Insertion

Very Low Leakage Current

Lead Free/RoHS Compliant (Note 3)

Mechanical Data

Case: SOT-23

Case Material: Molded Plastic. UL Flammability

Classification Rating 94V-0

Moisture Sensitivity: Level 1 per J-STD-020C

Terminals: Solderable per MIL-STD-202, Method 208

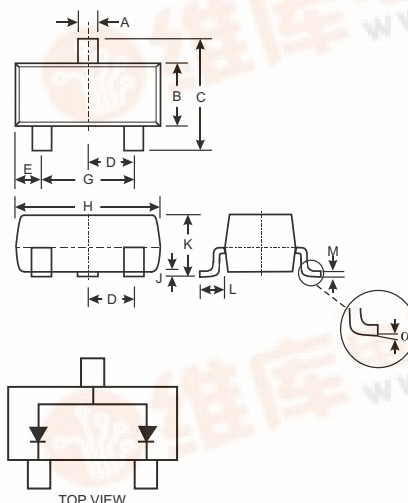
Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).

Polarity: See Diagram

Marking: K53, See Page 3

Ordering Information, See Page 3

Weight: 0.008 grams (approximate)



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
	0	8
All Dimensions in mm		

Maximum Ratings @ T_A = 25 °C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	85	V
RMS Reverse Voltage	V _{R(RMS)}	60	V
Forward Continuous Current (Note 2)	I _{FM}	160 140	mA
Repetitive Peak Forward Current (Note 2)	I _{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0 s @ t = 1.0ms @ t = 1.0s	I _{FSM}	4.0 1.0 0.5	A
Power Dissipation (Note 2)	P _d	250	mW
Thermal Resistance Junction to Ambient Air (Note 2)	R _{JA}	500	°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 1)	V _{(BR)R}	85			V	I _R = 100 μA
Forward Voltage	V _F			0.90 1.0 1.1 1.25	V	I _F = 1.0mA I _F = 10mA I _F = 50mA I _F = 150mA
Leakage Current (Note 1)	I _R			5.0 80	nA nA	V _R = 75V V _R = 75V, T _j = 150 °C
Total Capacitance	C _T		3		pF	V _R = 0, f = 1.0MHz
Reverse Recovery Time	t _{rr}			3.0	s	I _F = I _R = 10mA, I _{rr} = 0.1 x I _R , R _L = 100

- Notes:
1. Short duration test pulse to minimize self-heating effect.
 2. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
 3. No purposefully added lead.



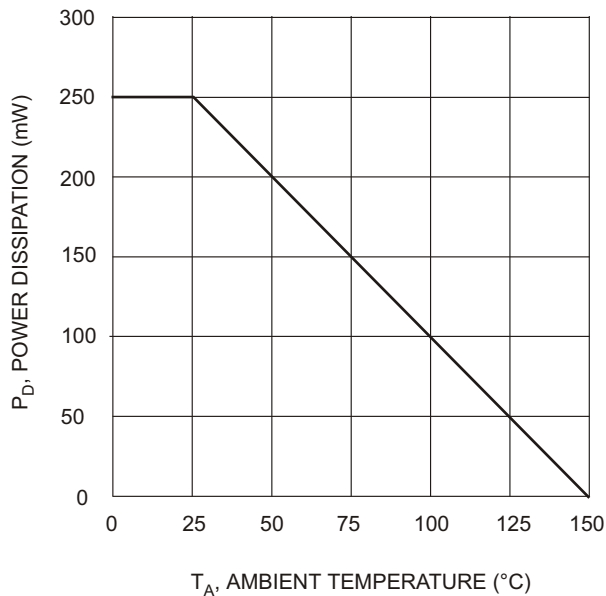


Fig. 1 Power Derating Curve

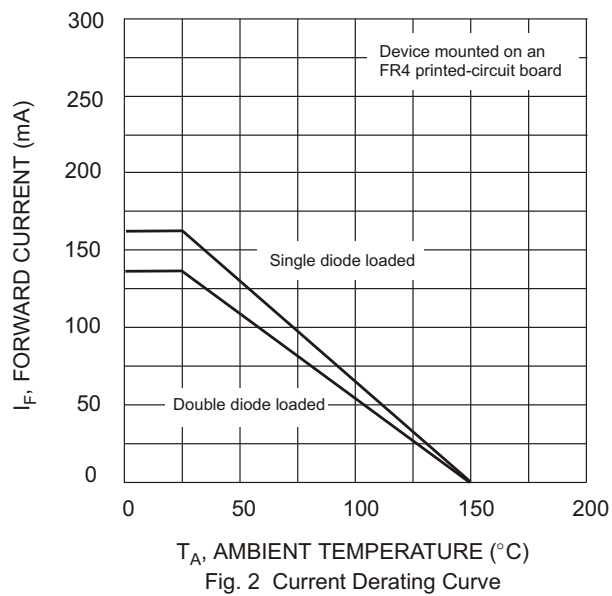


Fig. 2 Current Derating Curve

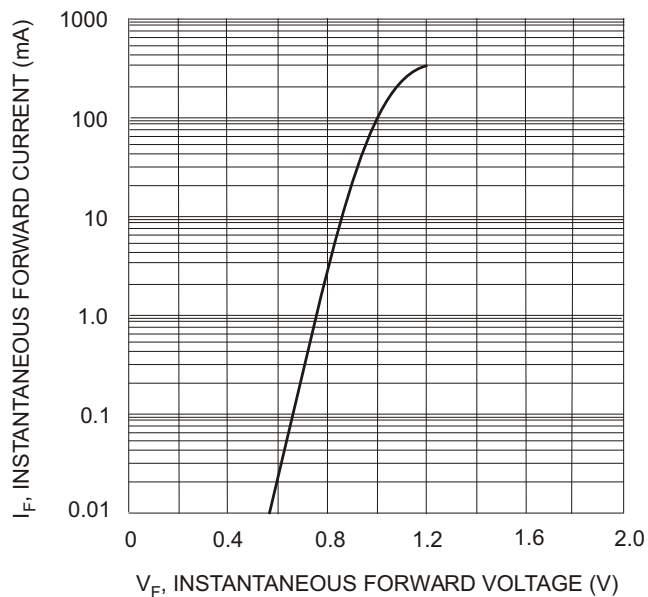


Fig. 3 Typical Forward Characteristics

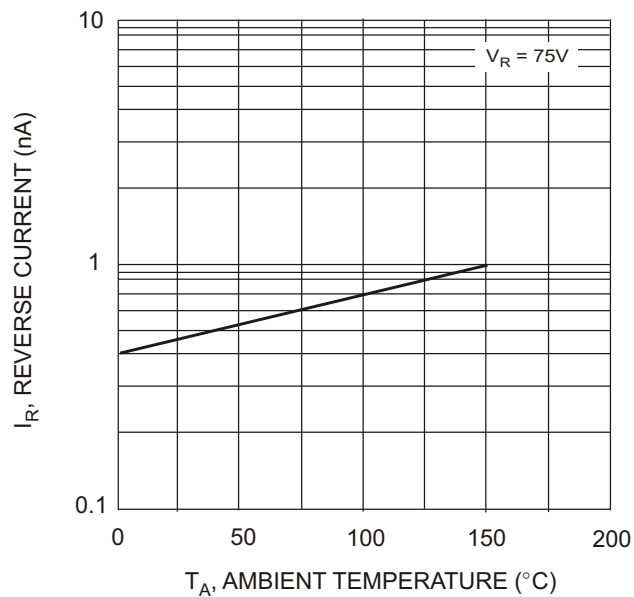


Fig. 4 Typical Reverse Characteristics

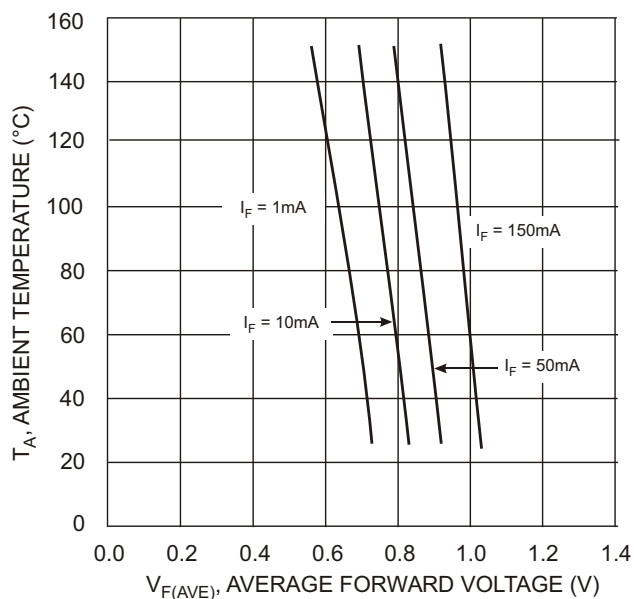


Fig. 5 Typical Forward Voltage vs Ambient Temperature

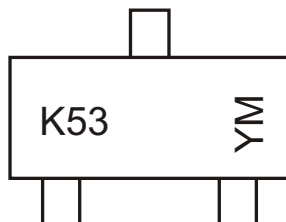


Ordering Information (Note 4)

Device	Packaging	Shipping
BAW156-7-F	SOT-23	3000/Tape & Reel

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information



K53 = Product Type Marking Code
YM = Date Code Marking
Y = Year ex: N = 2002
M = Month ex: 9 = September

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Code	J	K	L	M	N	P	R	S	T	U	V	W

Year	2010	2011	2012
Code	X	Y	Z

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.