



BAT46W

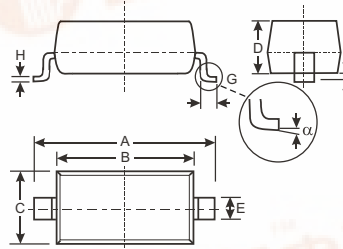
SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

- High Breakdown Voltage
- Low Turn-on Voltage
- Guard Ring Construction for Transient Protection
- Lead Free/RoHS Compliant Version (Note 4)

Mechanical Data

Case: SOD-123
 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: Cathode Band
 Marking: Date Code & Type Code, See Page 3
 Type Code: L6
 Ordering Information: See Page 3
 Weight: 0.01 grams (approximate)



SOD-123		
Dim	Min	Max
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.45	0.65
	0.55 Typical	
G	0.25	—
H	0.11 Typical	
J	—	0.10
	0	8
All Dimensions in mm		

Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	100	V
Forward Continuous Current (See figure 4)	I_F	150	mA
Repetitive Peak Forward Current (Note 1) @ $t_p < 1.0\text{s}$, Duty Cycle < 50%	I_{FRM}	350	mA
Forward Surge Forward Current (Note 1) @ $t_p = 10\text{ms}$	I_{FSM}	750	mA
Power Dissipation	P_d	200	mW

Thermal Characteristics

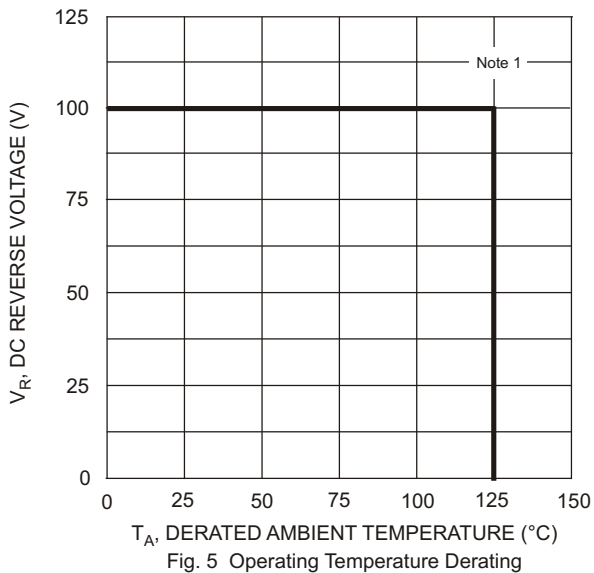
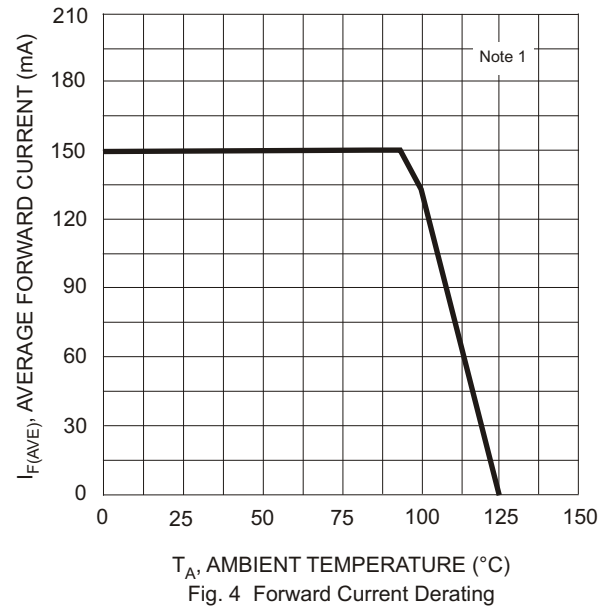
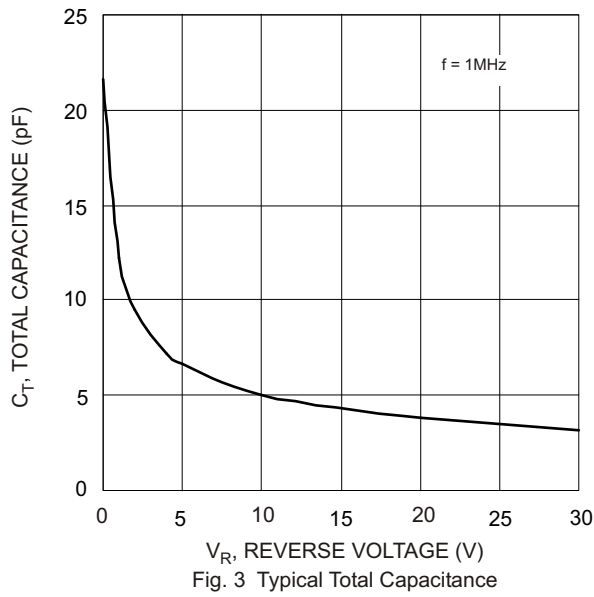
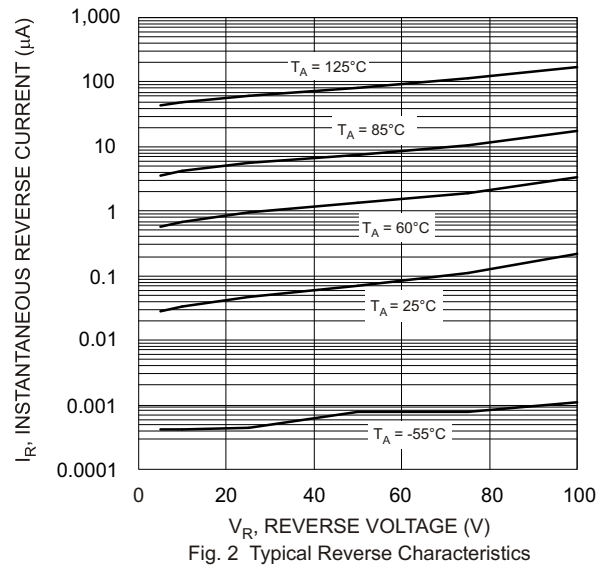
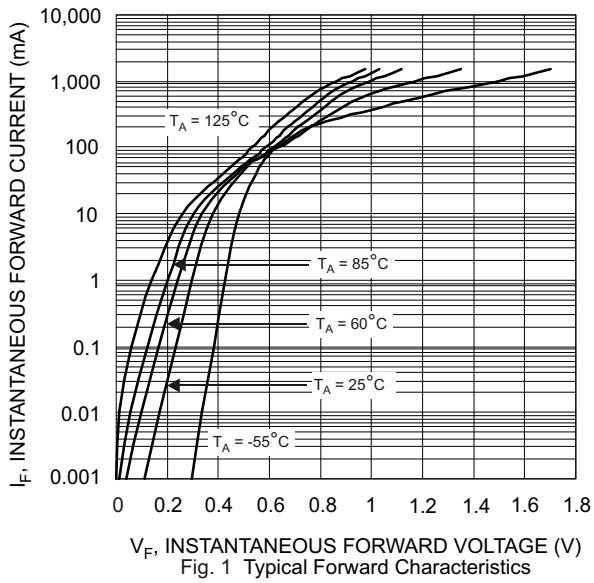
Characteristic	Symbol	Value	Unit
Thermal Resistance, Junction to Ambient Air (Note 1)	R_{JA}	420	C/W
Thermal Resistance, Junction to Ambient Air (Note 2)		370	
Operating Temperature Range	T_j	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 3)	$V_{(BR)R}$	100	—	—	V	$I_R = 100 \mu\text{A}$
Forward Voltage	V_F	—	—	0.25 0.45 1.00	V	$I_F = 0.1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 250\text{mA}$
Peak Reverse Current (Note 3)	I_R	—	—	0.3 5.0 0.5 7.5 1.0 15 2.0 20	A	$V_R = 1.5\text{V}$ $V_R = 1.5\text{V}$, $T_j = 60^\circ\text{C}$ $V_R = 10\text{V}$ $V_R = 10\text{V}$, $T_j = 60^\circ\text{C}$ $V_R = 50\text{V}$ $V_R = 50\text{V}$, $T_j = 60^\circ\text{C}$ $V_R = 75\text{V}$ $V_R = 75\text{V}$, $T_j = 60^\circ\text{C}$
Total Capacitance	C_T	—	20 12	—	pF	$V_R = 0\text{V}$, $f = 1.0\text{MHz}$ $V_R = 1.0\text{V}$, $f = 1.0\text{MHz}$

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





Note 1: 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>.

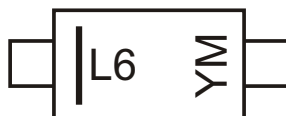


Ordering Information (Note 5)

Device	Packaging	Shipping
BAT46W-7-F	SOD-123	3000/Tape and Reel

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

Marking Information



L6 = Product Type Marking Code
YM = Date Code Marking
Y = Year (ex: S = 2005)
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	March	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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