

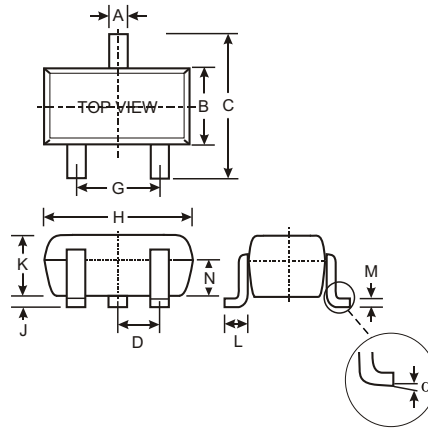
Features

Ultra-Small Surface Mount Package
 Low Forward Voltage Drop
 Fast Switching
 PN Junction Guard Ring for Transient and ESD Protection

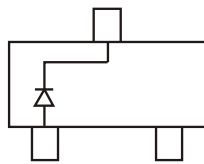
Lead Free/RoHS Compliant (Note 3)

Mechanical Data

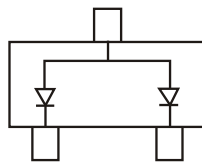
Case: SOT-523
 Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
 Moisture sensitivity: Level 1 per J-STD-020C
 Terminals: Finish - Solderable per MIL-STD-202, Method 208
 Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
 Polarity: See Diagrams Below
 Marking: See Diagrams Below & Page 2
 Weight: 0.002 grams (approx.)
 Ordering Information, see Page 2



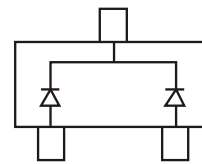
SOT-523			
Dim	Min	Max	Typ
A	0.15	0.30	0.22
B	0.75	0.85	0.80
C	1.45	1.75	1.60
D			0.50
G	0.90	1.10	1.00
H	1.50	1.70	1.60
J	0.00	0.10	0.05
K	0.60	0.80	0.75
L	0.10	0.30	0.22
M	0.10	0.20	0.12
N	0.45	0.65	0.50
	0	8	
All Dimensions in mm			



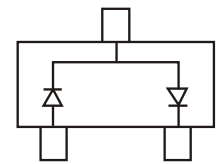
BAT54T Marking: L1



BAT54AT Marking: L2



BAT54CT Marking: L3



BAT54ST Marking: L4

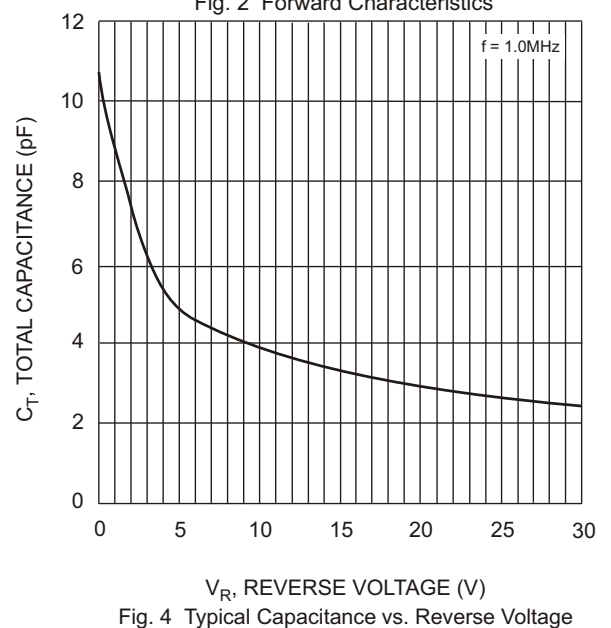
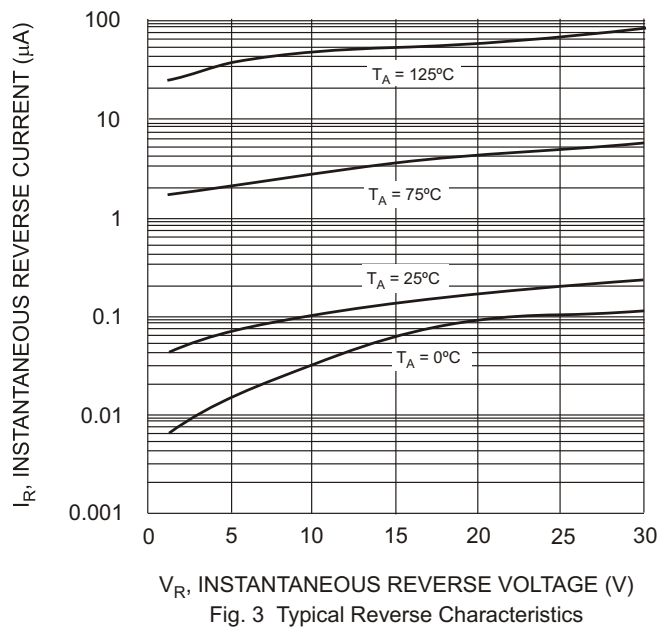
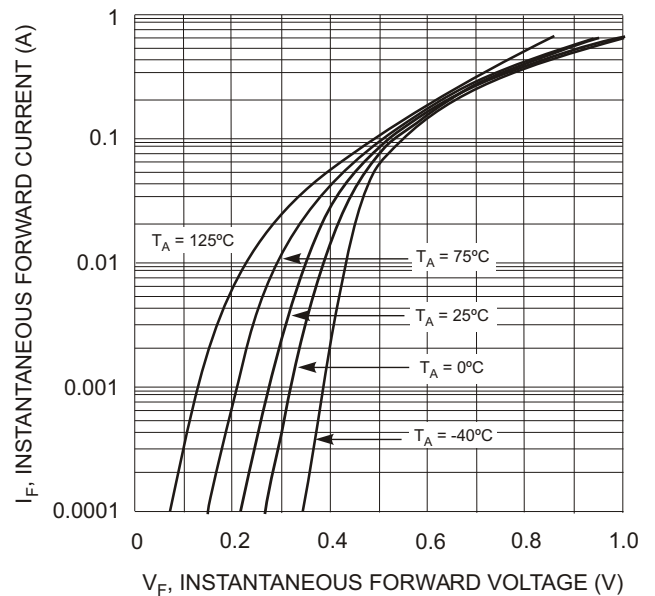
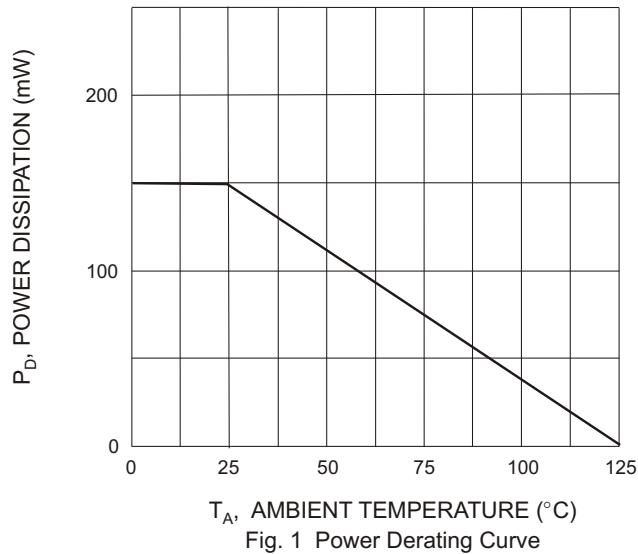
Maximum Ratings @ T_A = 25 °C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
Forward Continuous Current (Note 1)	I_{FM}	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Forward Surge Current @ t < 1.0s	I_{FSM}	600	mA
Power Dissipation (Note 1)	P_d	150	mW
Thermal Resistance, Junction to Ambient (Note 1)	R_{JA}	833	°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +125	°C

Electrical Characteristics @ T_A = 25 °C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	30			V	$I_R = 100 \mu A$
Forward Voltage	V_F			240 320 400 500 1000	mV	$I_F = 0.1mA$ $I_F = 1mA$ $I_F = 10mA$ $I_F = 30mA$ $I_F = 100mA$
Reverse Leakage Current (Note 2)	I_R			2.0	μA	$V_R = 25V$
Total Capacitance	C_T			10	pF	$V_R = 1.0V, f = 1.0MHz$
Reverse Recovery Time	t_{rr}			5.0	ns	$I_F = 10mA$ through $I_R = 10mA$ to $I_R = 1.0mA, R_L = 100 \Omega$

Notes: 1. Device 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>.
 2. Short duration test pulse used to minimize self-heating effect.
 3. No purposefully added lead.

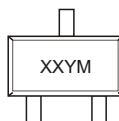


Ordering Information (Note 4)

Device	Packaging	Shipping
BAT54T-7-F	SOT-523	3000/Tape & Reel
BAT54AT-7-F	SOT-523	3000/Tape & Reel
BAT54CT-7-F	SOT-523	3000/Tape & Reel
BAT54ST-7-F	SOT-523	3000/Tape & Reel

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

Marking Information



XX = Product Type Marking Code (See Page 1, e.g. L1 = BAT54T)
 YM = Date Code Marking
 Y = Year (ex: N = 2002)
 M = Month (ex: 9 = September)

Date Code Key

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	N	P	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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