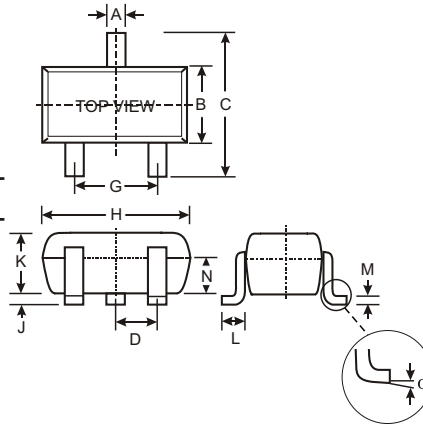


### Features

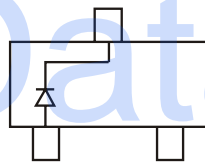
- Ultra-Small Surface Mount Package
- Low Forward Voltage Drop
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Available in Lead Free Version

### Mechanical Data

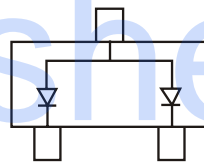
- Case: SOT-523, Molded Plastic
- Case material - UL Flammability Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solderable per MIL-STD-202, Method 208
- Also Available in Lead Free Plating (Matte Tin Finish). Please See Ordering Information, Note 4, on Page 2
- Polarity: See Diagrams Below
- Marking: See Diagrams Below & Page 2
- Weight: 0.002 grams (approx.)
- Ordering Information, see Page 2



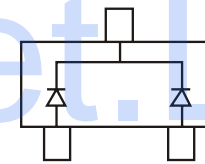
SOT-523			
Dim	Min	Max	Typ
A	0.15	0.30	0.22
B	0.75	0.85	0.80
C	1.45	1.75	1.60
D	—	—	0.50
G	0.90	1.10	1.00
H	1.50	1.70	1.60
J	0.00	0.10	0.05
K	0.60	0.80	0.75
L	0.10	0.30	0.22
M	0.10	0.20	0.12
N	0.45	0.65	0.50
$\alpha$	0°	8°	—
All Dimensions in mm			



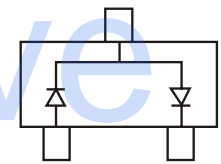
BAT54T Marking: L1



BAT54AT Marking: L2



BAT54CT Marking: L3



BAT54ST Marking: L4

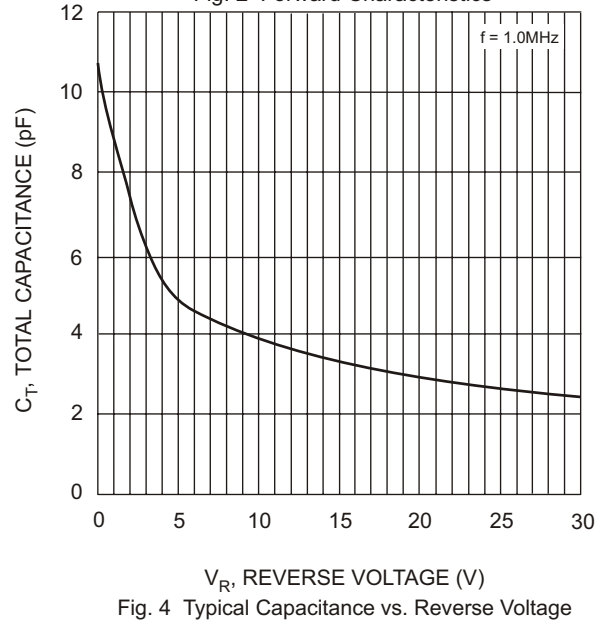
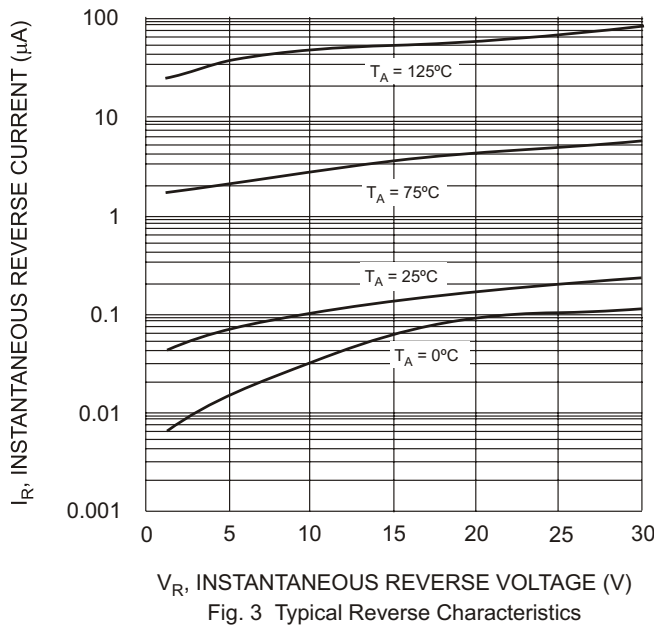
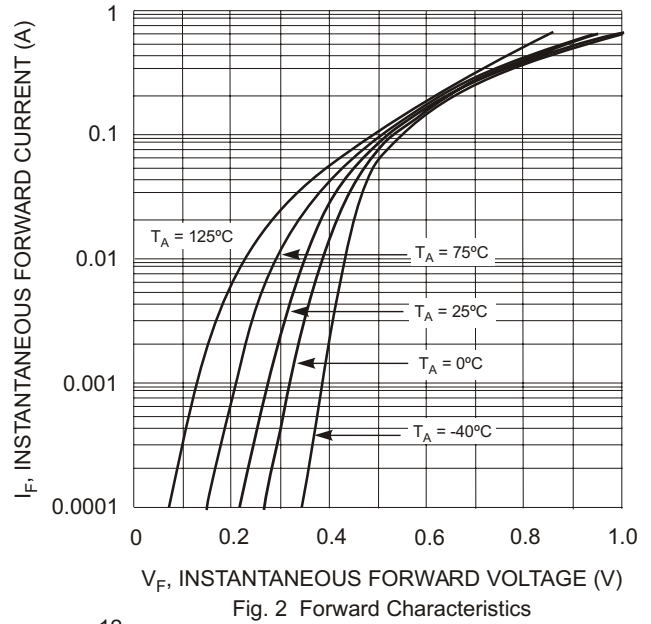
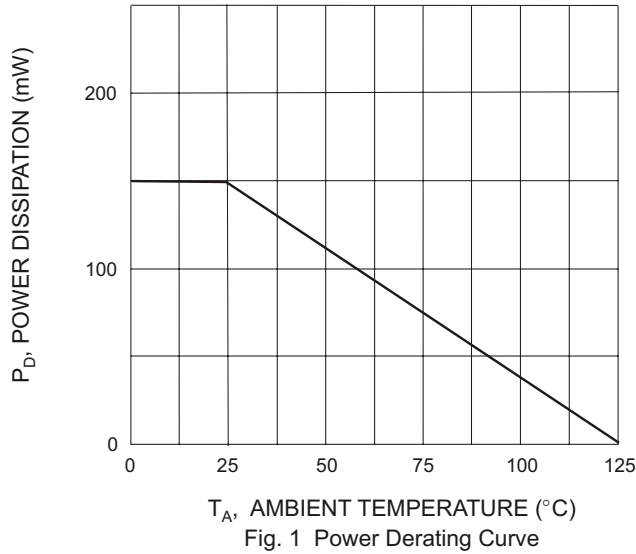
### Maximum Ratings @ T<sub>A</sub> = 25°C unless otherwise specified

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)	$R_{\theta JA}$	833	°C/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +125	°C

### Electrical Characteristics @ T<sub>A</sub> = 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 (Note 2)	$V_F$	—	—	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	$\mu A$	$V_R = 25V$
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.

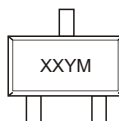


**Ordering Information** (Note 3 and 4)

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

- Notes: 3. For Packaging Details: go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.  
 4. For lead free terminal plating part number, please add "-F" suffix to part number above. Example: BAT54T-7-F.

**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
Code	N	P	R	S	T	U	V	W

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