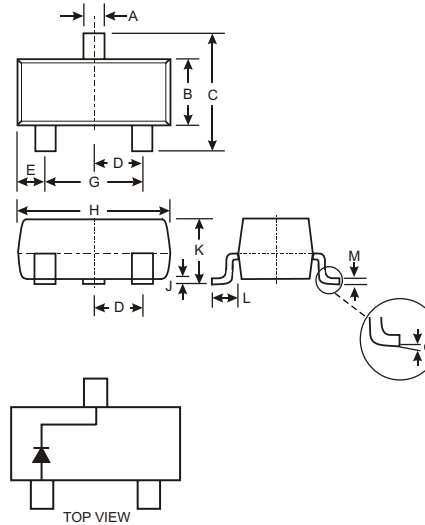


### Features

- Low Forward Voltage Drop
- High Conductance
- Available in Lead Free/RoHS Compliant Version (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
- Also Available in Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe). Please See Ordering Information, Note 5, on Page 3
- Polarity: See Diagram
- Marking: KSJ and Date Code, 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
$\alpha$	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	$V_{RRM}$ $V_{RWM}$ $V_R$	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Average Rectified Current (Note 2)	$I_O$	0.5	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	3	A
Power Dissipation (see Figure 1) (Note 2)	$P_d$	480	mW
Typical Thermal Resistance, Junction to Ambient Air (Note 2)	$R_{\theta JA}$	286	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-40 to +125	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	40	—	—	V	$I_R = 1\text{mA}$
Forward Voltage (Note 1)	$V_F$	—	285 480	300 550	mV	$I_F = 10\text{mA}$ $I_F = 500\text{mA}$
Reverse Current (Note 1)	$I_R$	—	1.0 2.0	30 50	$\mu\text{A}$	$V_R = 10\text{V}$ $V_R = 30\text{V}$
Total Capacitance	$C_T$	—	125 20	—	pF	$V_R = 0\text{V}, f = 1.0\text{MHz}$ $V_R = 10\text{V}, f = 1.0\text{MHz}$

- Notes:
1. Short duration test pulse used 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.

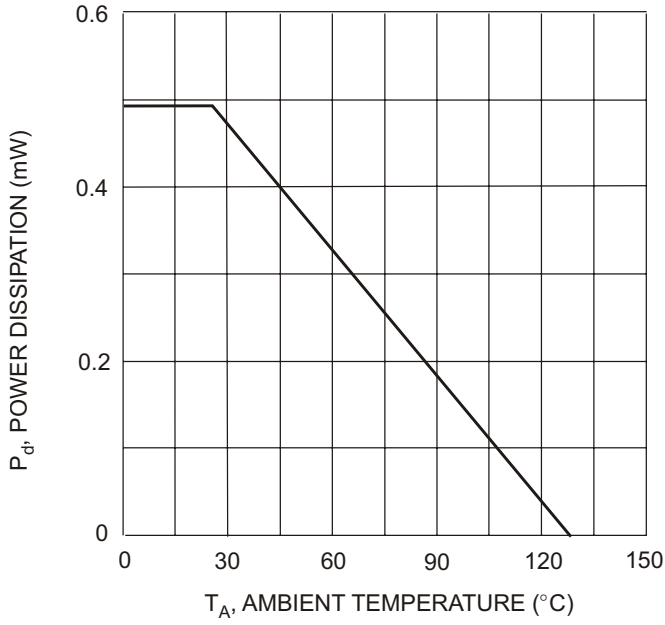


Fig. 1 Forward Current Derating Curve

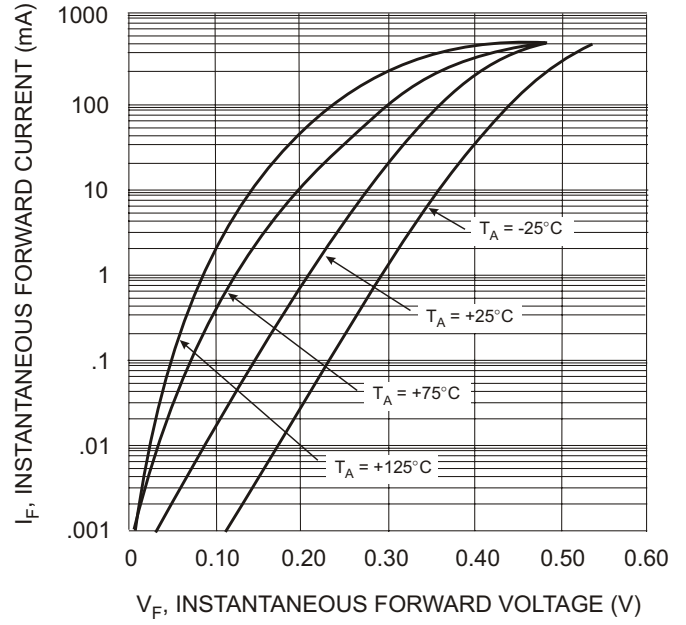


Fig. 2 Typical Forward Characteristics

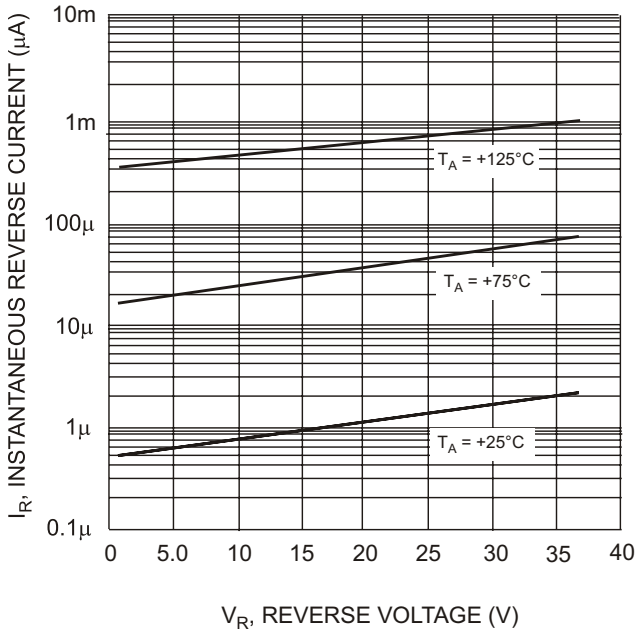


Fig. 3 Typical Reverse Characteristics

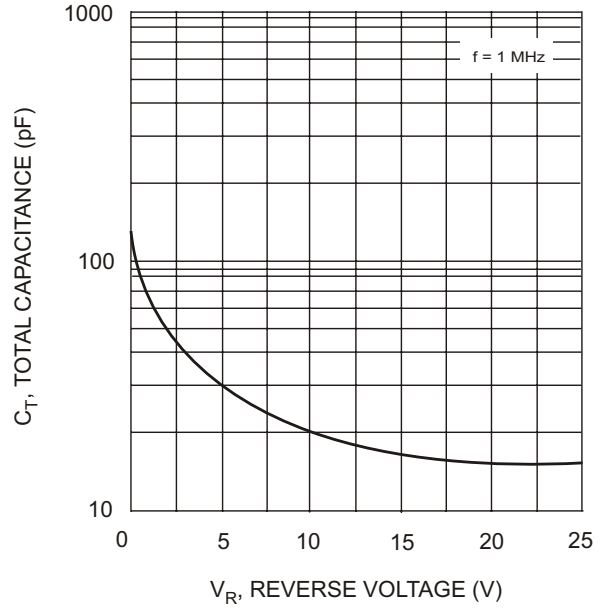


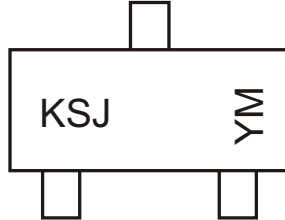
Fig. 4 Typical Total Capacitance vs. Reverse Voltage

**Ordering Information** (Note 4)

Device	Packaging	Shipping
BAT400D-7	SOT-23	3000/Tape & Reel

- Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.  
 4. For Lead Free/RoHS Compliant version part number, please add "-F" suffix to the part number above. Example: BAT400D-7-F.

**Marking Information**



KSJ = 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

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