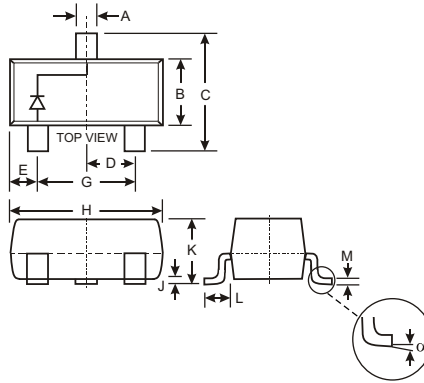


Features

- Very Low Forward Voltage Drop
- High Conductance
- For Use in DC-DC Converter, PCMCIA, and Mobile Telecommunications Applications
- Lead Free/RoHS Compliant (Note 3)**
- Qualified to AEC-Q101 Standards for High Reliability**

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: K77 or K79 and Date Code, 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	40	V
RMS Reverse Voltage	V _{R(RMS)}	28	V
Average Rectified Current	I _O	0.75	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load	I _{FSM}	5.5	A
Power Dissipation (Note 1)	P _d	350	mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	R _{JA}	286	C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 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}	40	45		V	I _R = 300uA
Forward Voltage	V _F		225 235 290 340 390 420 475	280 310 350 420 490 540 650	mV	I _F = 50mA I _F = 100mA I _F = 250mA I _F = 500mA I _F = 750mA I _F = 1000mA I _F = 1500mA
Reverse Current (Note 2)	I _R		50	100	A	V _R = 30V
Total Capacitance	C _T		175 25		pF pF	V _R = 0V, f = 1.0MHz V _R = 25V, f = 1.0MHz
Reverse Recovery Time	t _{rr}			10	ns	I _F = I _R = 100mA, I _{rr} = 10mA. See figure 6.

- Notes: 1. Part 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.

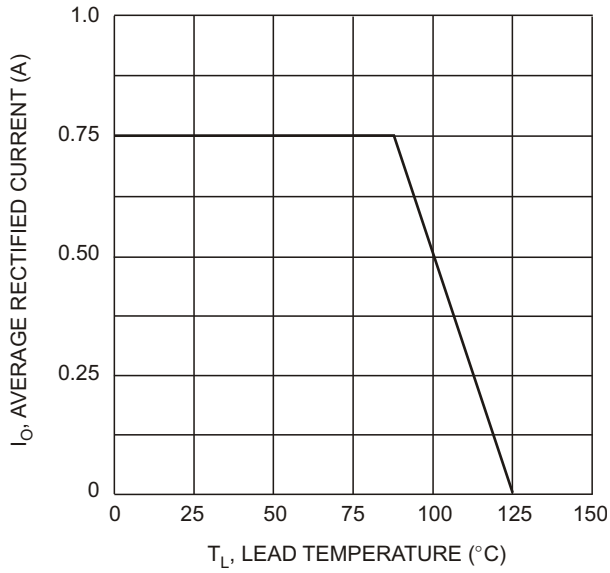


Fig. 1 Forward Current Derating Curve

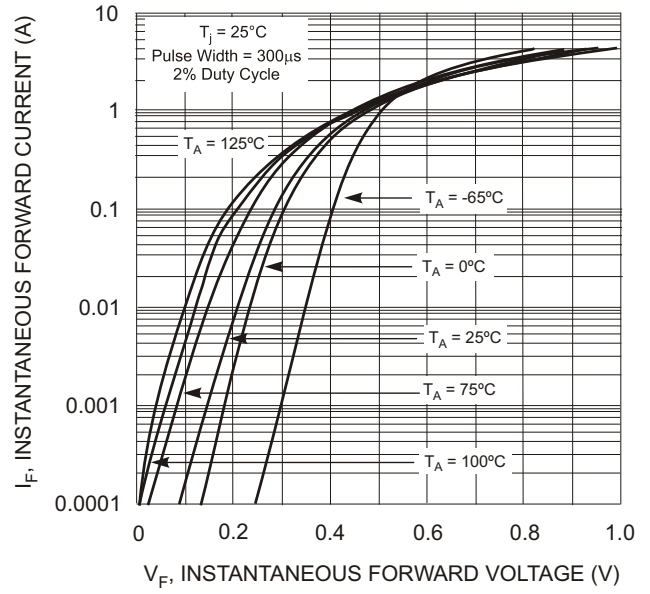


Fig. 2 Typical Forward Characteristics

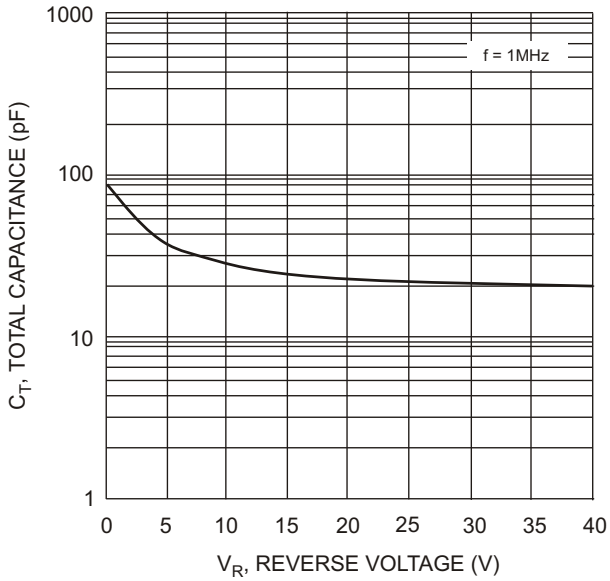


Fig. 3 Total Capacitance vs Reverse Voltage

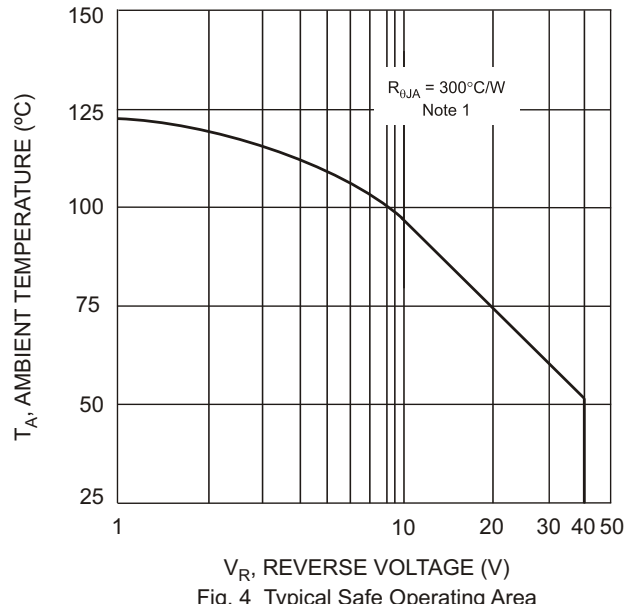


Fig. 4 Typical Safe Operating Area

Note: 1. Assumed application thermal conditions. R_{JA} varies depending on application.

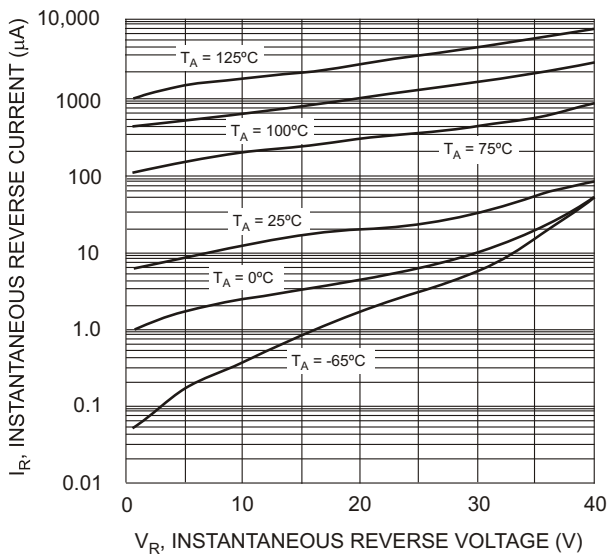


Fig. 5 Typical Reverse Characteristics

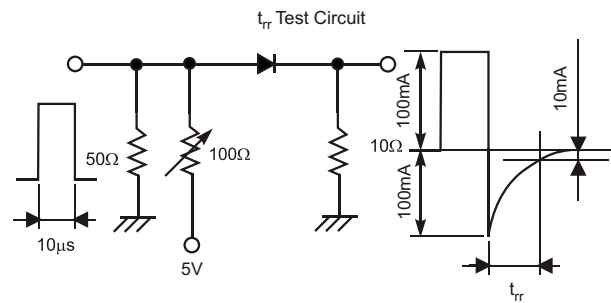


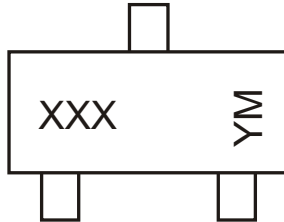
Fig. 6 Reverse Recovery Time Test Circuit and Waveform

Ordering Information (Note 4)

Device	Packaging	Shipping
BAT750-7-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



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

Date Code Key

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	M	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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