

BAT750

0.75A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

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

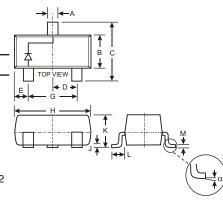
Lead Free Plating (Matte Tin Finish annealed over Alloy 42

leadframe).

Polarity: See Diagram

Marking: K77 or K79 and Date Code, See Page 3

Weight: 0.008 grams (approximate)



	SOT-23									
Dim	Min	Max								
Α	0.37	0.51								
В	1.20	1.40								
С	2.30	2.50								
D	0.89	1.03								
Е	0.45	0.60								
G	1.78	2.05								
Н	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 _R WM V _R	40	٧
RMS Reverse Voltage	V _{R(RMS)}	28	V
Average Rectified Current	Io	0.75	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load	I _{FSM}	5.5	А
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	С

Electrical Characteristics @ T_A = 25 C unless otherwise specified

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	V _{(BR)R}	40	45		٧	I _R = 300uA
Forward Voltage	VF		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 = 1500mA
Reverse Current (Note 2)	I _R		50	100	Α	V _R = 30V
Total Capacitance			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.



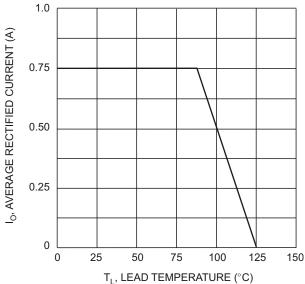
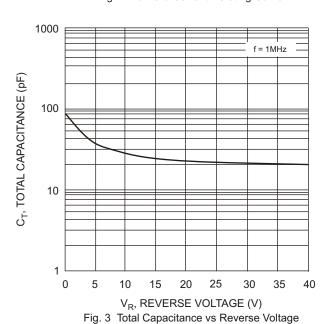
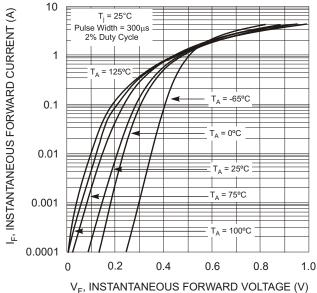


Fig. 1 Forward Current Derating Curve



10,000 $I_{\rm R}$, INSTANTANEOUS REVERSE CURRENT (μA) T_A = 125°C 1000 T_A = 100°C 100 T_A = 25°C 10 1.0 0.1 0.01 10 20 30 V_R, INSTANTANEOUS REVERSE VOLTAGE (V) Fig. 5 Typical Reverse Characteristics



V_F, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typical Forward Characteristics

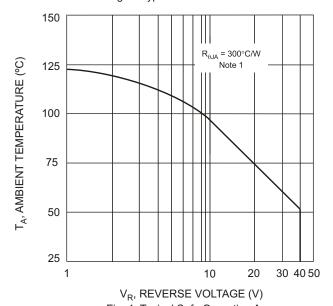


Fig. 4 Typical Safe Operating Area

Note: 1. Assumed application thermal conditions. R JA varies depending on application.

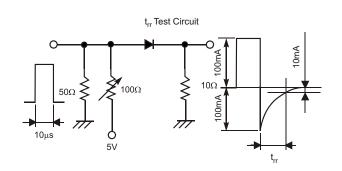


Fig. 6 Reverse Recovery Time Test Circuit and Waveform

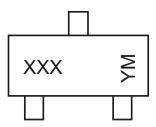


Ordering Information (Note 4)

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	М	N	Р	R	S	Т	U	V	W	Х	Υ	Z

Month	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	0	N	D

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