DESCRIPTION

The BAT750 is available in SOT-23 Package.

FEATURES

- Very Low Forward Voltage Drop
- High Conductance
- For Use in DC-DC Converter, PCMCIA, and Mobile Telecommunications Applications
- Available in SOT-23 Package

ORDERING INFORMATION

Package Type	Part Number
SOT-23	BAT750
Note	3,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION

ABSOLUTE MAXIMUM RATINGS

T_J = 125°C unless otherwise noted.

V_{RRM}, Peak Repetitive Reverse Voltage V_{RWM}, Working Peak Reverse Voltage V_R, DC Blocking Voltage	40Volts
$V_{R(RMS)}$, RMS Reverse Voltage	28Volts
I_o, Average Rectified Current NOTE1	0.75Adc
I_{FSM}, Non–Repetitive Peak Forward Current	5.5Adc
P_D, Power Dissipation NOTE1	350mW
$R_{\theta JA}$, Typical Thermal Resistance, Junction to Ambient Air NOTE1	286°C/W
T_J, T_{stg}, Storage Temperature Range	-55°C to +150°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

NOTE1: Part mounted on FR-4 PC board with recommended pad layout.

ELECTRICAL CHARACTERISTICS

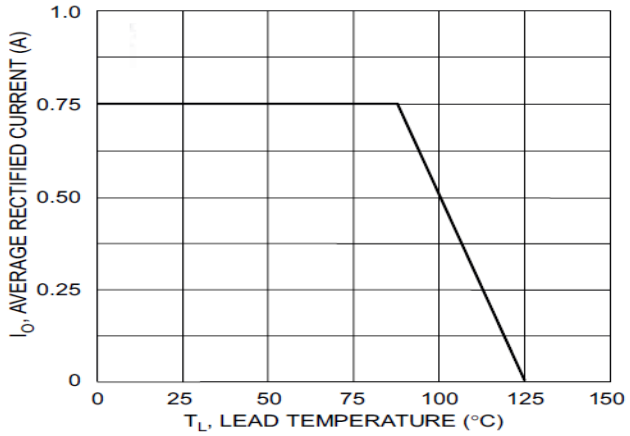
T_A = 25°C unless otherwise noted.

Parameter	Symbols	Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R = 300μA NOTE2	40	45	-	Volts
Reverse Leakage	I_R	V_R = 30V NOTE2	-	50	100	μAdc
Forward Voltage	V_F	I_F = 50mAdc NOTE2	-	225	280	mVdc
		I_F = 100mAdc NOTE2		235	310	
		I_F = 250mAdc NOTE2		290	350	
		I_F = 500mAdc NOTE2		340	420	
		I_F = 750mAdc NOTE2		390	490	
		I_F = 1000mAdc NOTE2		420	540	
		I_F = 1500mAdc NOTE2		475	650	
Total Capacitance	C_T	V_R = 0V, f = 1.0MHz	-	175	-	pF
		V_R = 25V, f = 1.0MHz		25	-	

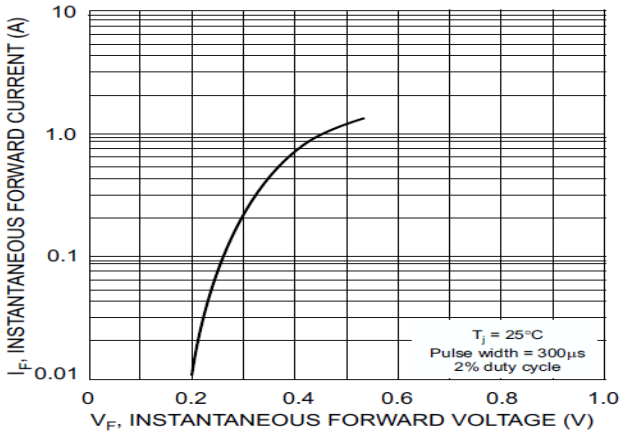
NOTE2: Short duration test pulse used to minimize self-heating effect.

TYPICAL PERFORMANCE CHARACTERISTICS

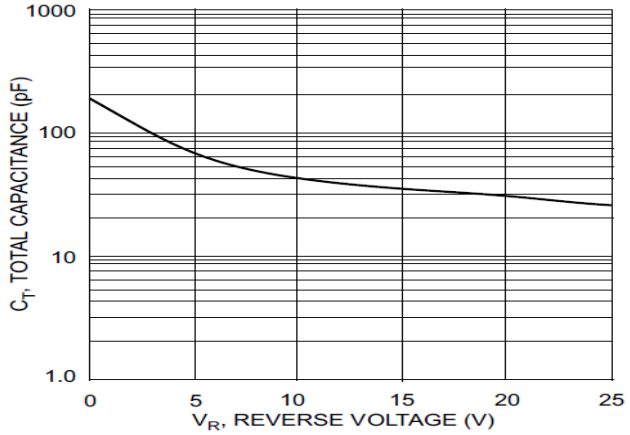
1. Forward Current Derating Curve



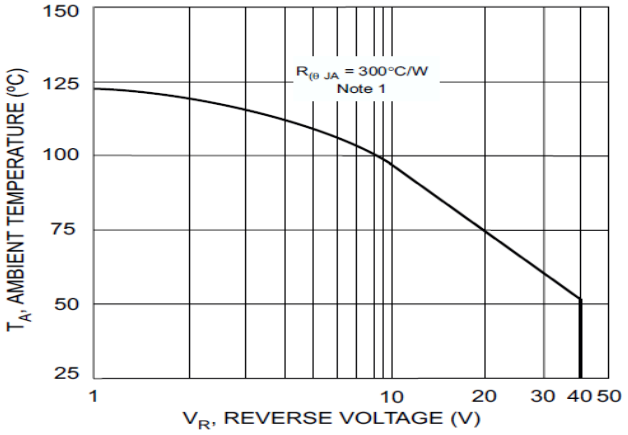
2. Typical Forward Characteristics



3. Total Capacitance vs Reverse Voltage



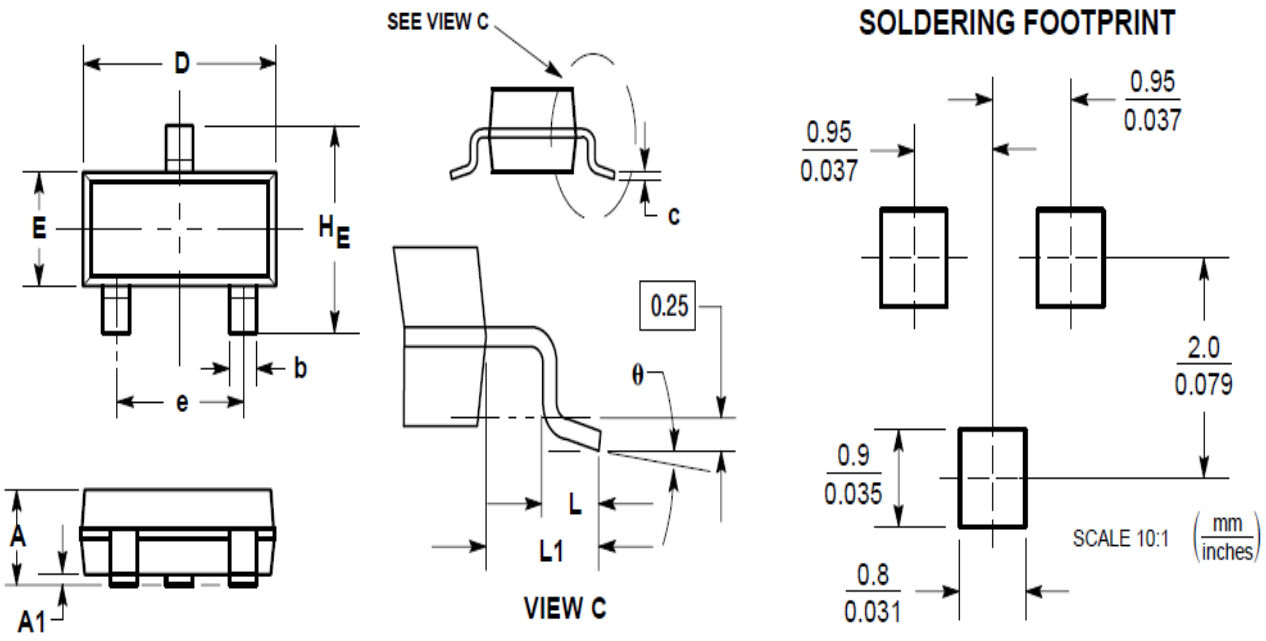
4. Typical Safe Operating Area



NOTE: Assumed application thermal conditions. $R_{\theta JA}$ varies depending on application

PACKAGE INFORMATION

Dimension in SOT-23 Package (Unit: mm)



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.035	0.044	0.89	1.11
A1	0.001	0.004	0.01	0.10
b	0.015	0.020	0.37	0.50
c	0.003	0.007	0.09	0.18
D	0.110	0.120	2.80	3.04
E	0.047	0.055	1.20	1.40
e	0.070	0.081	1.78	2.04
L	0.004	0.012	0.10	0.30
L1	0.014	0.029	0.35	0.69
H_E	0.083	0.104	2.10	2.64

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