

BAT750 SOT23 Schottky barrier diode

Summary

 $V_R = 40V$

 $I_F = 750 \text{mA}$

V_F < 490mV @ 750mA



Description

A high current Schottky barrier diode in a small outline surface mount package for applications where space is limited.

Features

- Low V_F
- · High current capability
- SOT23 package

Applications

- DC-DC converters
- Mobile telecoms
- PCMIA



C N/C

Ordering information

Device	Reel size (inches)	Tape width (mm)	Quantity per reel
BAT750TA	7	8	3000

Device marking

1G1

Absolute maximum ratings

Parameter	Symbol	Limit	Unit
Collector reverse voltage	V _R	40	V
RMS reverse voltage	V _{R(RMS)}	28	V
Forward current (continuous)	I _F	750	mA
Forward voltage @ I _F = 750mA	V _F	490	mV
Average peak forward current; DC = 50%	I _{FAV}	1500	mA
Non repetitive forward current $t \le 100 \mu S$ $t \le 8.3 ms$	I _{FSM}	12 5.5	А
Power dissipation @ T _{amb} = 25°C	P _{tot}	350	mW
Typical thermal resistance, junction to ambient air	$R_{\Theta JA}$	286	°C/W
Storage temperature range	T _{stg}	-55 to +150	°C
Junction temperature	T _j	125	°C

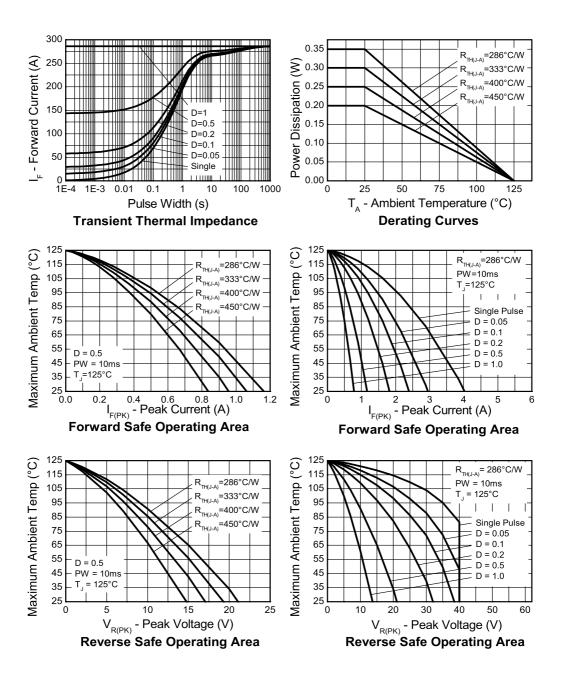
Electrical characteristics (@ T_{amb} = 25°C unless otherwise stated)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Reverse breakdown voltage	V _{(BR)R}	40	60		V	$I_R = 300 \mu A$
Forward voltage	V _F		225	280	mV	I _F = 50mA ^(*)
			235	310	mV	I _F = 100mA ^(*)
			290	350	mV	I _F = 250mA ^(*)
			340	420	mV	I _F = 500mA ^(*)
			390	490	mV	I _F = 750mA ^(*)
			440	540	mV	I _F = 1000mA ^(*)
			530	650	mV	I _F = 1500mA ^(*)
Reverse current	I _R		50	100	μΑ	V _R = 30V
Diode capacitance	C _D		25	-	pF	V _R = 25V, f = 1.0MHz
Reverse recovery time	t _{rr}		5	-	ns	$I_F = I_R = 100 \text{mA},$ $I_{rr} = 10 \text{mA}$

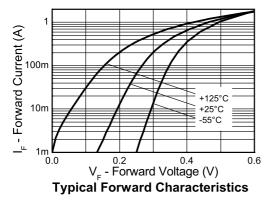
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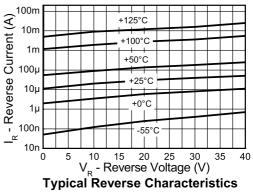
(*) Measured under pulsed conditions. Pulse width = 300 μ duty cycle \leq 2%.

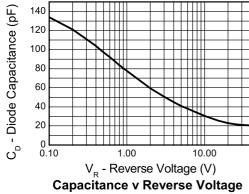
Thermal data



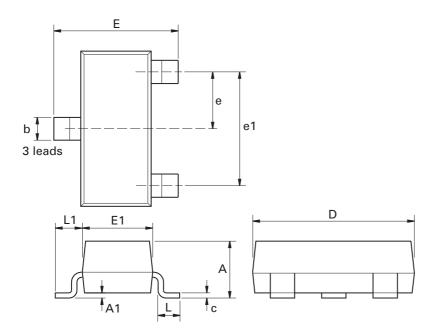
Typical characteristics







Package outline - SOT23



Dim.	Millin	neters	Inc	hes	Dim.	Millimeters		Inches	
	Min.	Max.	Min.	Max.		Min.	Max.	Max.	Max.
Α	-	1.12	-	0.044	e1	1.90 NOM		0.075 NOM	
A1	0.01	0.10	0.0004	0.004	Е	2.10	2.64	0.083	0.104
b	0.30	0.50	0.012	0.020	E1	1.20	1.40	0.047	0.055
С	0.085	0.120	0.003	0.008	L	0.25	0.62	0.018	0.024
D	2.80	3.04	0.110	0.120	L1	0.45	0.62	0.018	0.024
е	0.95	NOM	0.0375	NOM	-	-	-	-	-

Note: Controlling dimensions are in millimeters. Approximate dimensions are provided in inches

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WEEL and ELV an ootivoo.					
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"Active"	Product status recommended for new designs				
"Last time buy (LTB)"	Device will be discontinued and last time buy period and delivery is in effect				
"Not recommended for new de	esigns" Device is still in production to support existing designs and production				
"Obsolete"	Production has been discontinued				
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