

BAT750 SOT23 Schottky barrier diode

Summary

V_R = 40V I_F = 750mA 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

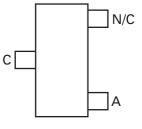
Ordering information

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

Device marking

1G1





Top view

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)	١ _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	Тj	125	°C

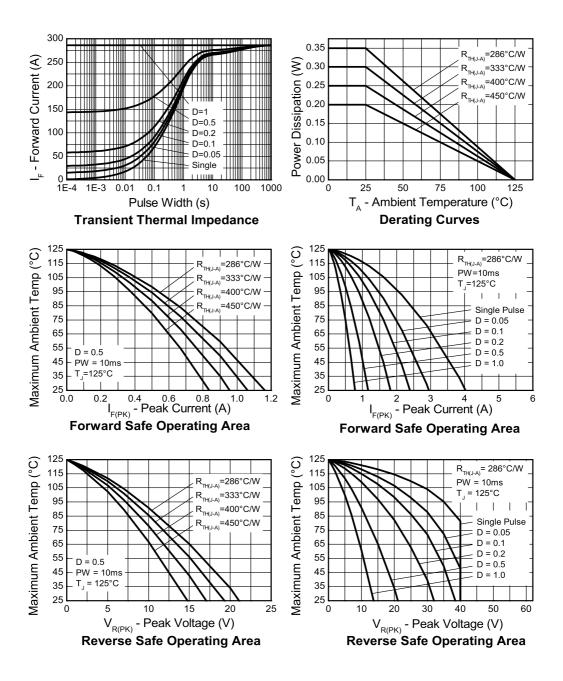
Electrical characteristics (@ $T_{amb} = 25^{\circ}C$ unless otherwise stated)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Reverse breakdown voltage	V _{(BR)R}	40	60		V	I _R = 300μA
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	μA	V _R = 30V
Diode capacitance	CD		25	-	pF	V _R = 25V, f = 1.0MHz
Reverse recovery time	t _{rr}		5	-	ns	$I_F = I_R = 100 \text{mA},$
						I _{rr} = 10mA

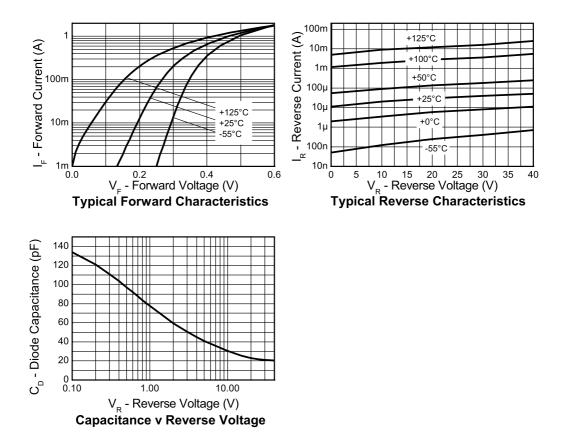
NOTES:

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

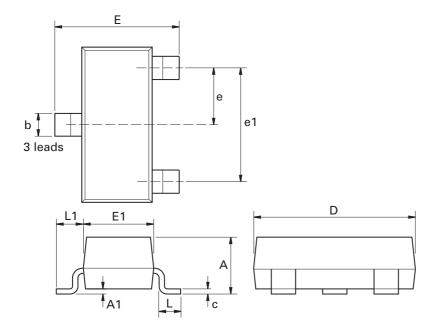
Thermal data



Typical characteristics



Package outline - SOT23



Dim.	Millin	neters	Inc	hes	Dim.	Millimeters		Inches	
	Min.	Max.	Min.	Max.		Min.	Max.	Max.	Max.
А	-	1.12	-	0.044	e1	1.90	NOM	0.075	NOM
A1	0.01	0.10	0.0004	0.004	E	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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