

# BAT750

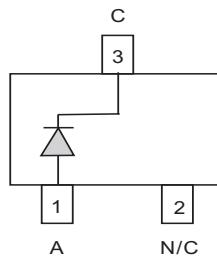
## SCHOTTKY BARRIER DIODE

### FEATURES

- Low  $V_F$
- High current capability
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

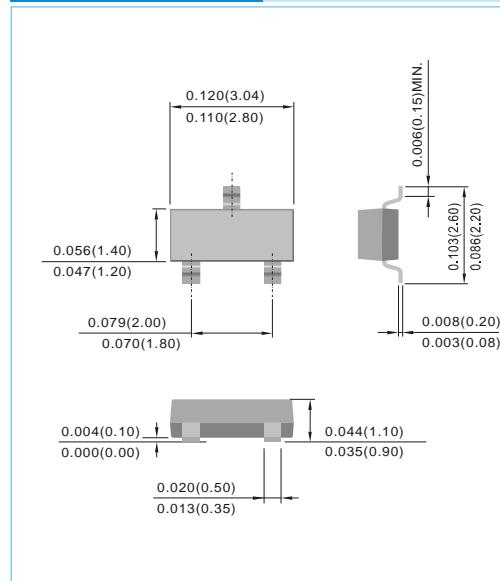
### MECHANICAL DATA

- Case : SOT-23, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0003 ounces, 0.0084 grams
- Marking : 750



**SOT-23**

Unit : inch(mm)



### ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Limit	Unit
Collector reverse voltage	$V_R$	40	V
RMS reverse voltage	$V_R(\text{RMS})$	28	V
Forward current (continuous)	$I_F$	750	mA
Forward voltage@ $I_F=750\text{mA}$	$V_F$	490	mV
Average peak forward current; DC=50%	$I_{FAV}$	1500	mA
Non repetitive forward current $t \leq 100\mu\text{s}$ $t \leq 8.3\text{ms}$	$I_{FSM}$	12 5.5	A
Power dissipation@ $T_A=25^\circ\text{C}$	$P_{TOT}$	350	mW
Typical thermal resistance, junction to ambient air	$R_{\theta JA}$	286	$^\circ\text{C/W}$
Storage temperature range	$T_{STG}$	-55 to + 150	$^\circ\text{C}$
Junction temperature	$T_J$	125	$^\circ\text{C}$

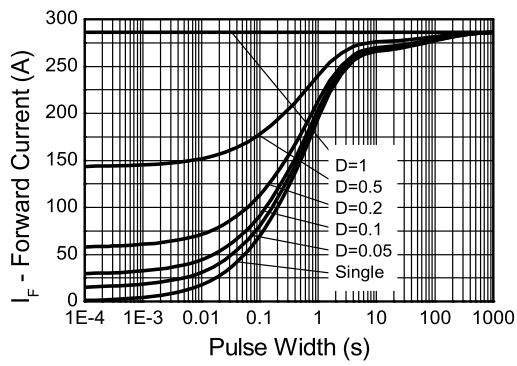
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## ELECTRICAL CHARACTERISTICS (@ $T_A=25^\circ C$ unless otherwise stated)

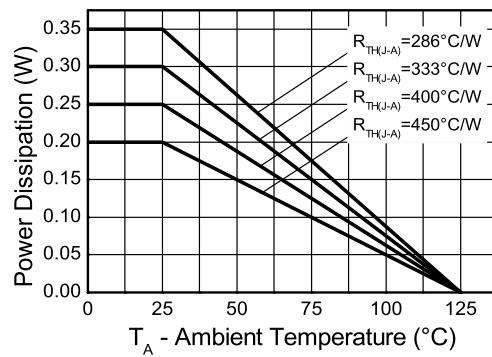
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse breakdown voltage	$V_{(BR)R}$	$I_R=300\mu A$	40	60	-	V
Forward voltage (Note 1)	$V_F$	$I_F=50mA$	-	250	280	mV
		$I_F=100mA$	-	270	310	
		$I_F=250mA$	-	310	350	
		$I_F=500mA$	-	350	420	
		$I_F=750mA$	-	390	490	
		$I_F=1000mA$	-	420	540	
		$I_F=1500mA$	-	490	650	
Reverse current	$I_R$	$V_R=30V$	-	50	100	$\mu A$
Off state junction capacitance	$C_J$	$V_R=25V, f=1.0MHz$	-	18	-	pF

Note : 1. Measured under pulsed conditions. Pulse width =  $300\mu s$  duty cycle < 2%

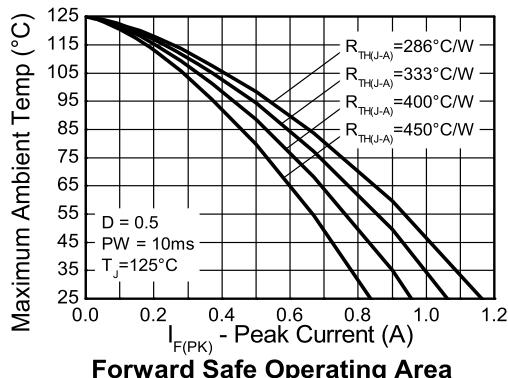
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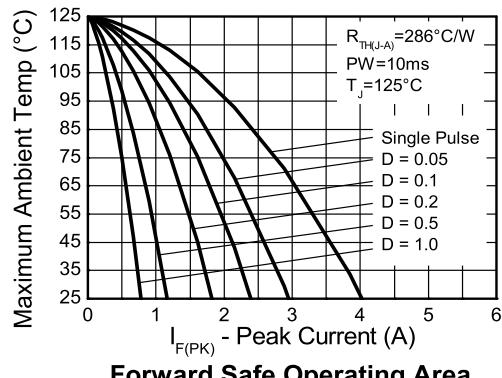
Transient Thermal Impedance



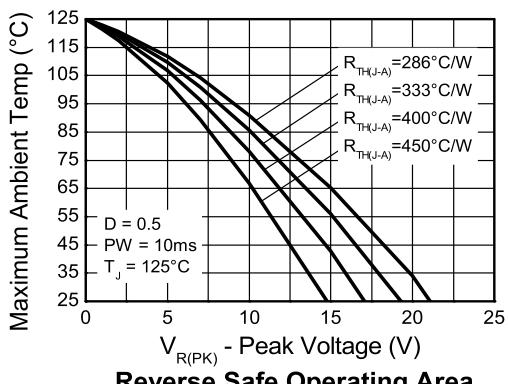
Derating Curves



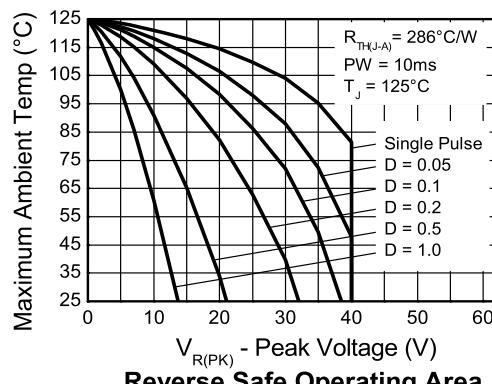
Forward Safe Operating Area



Forward Safe Operating Area

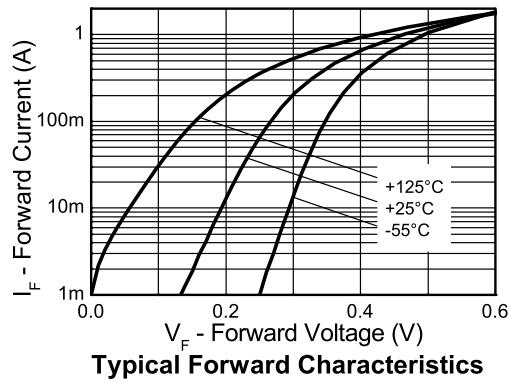


Reverse Safe Operating Area

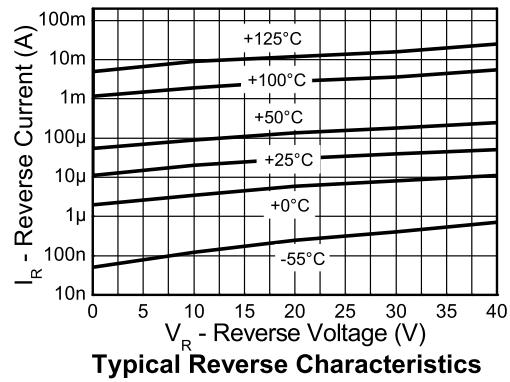


Reverse Safe Operating Area

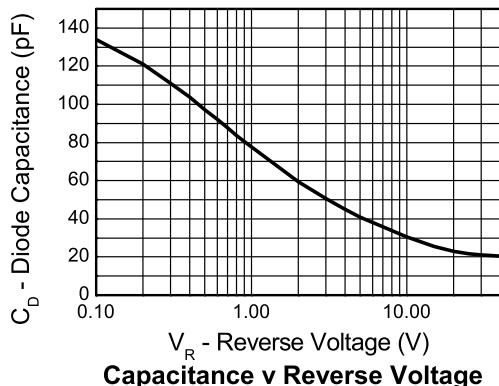
## BAT750



Typical Forward Characteristics



Typical Reverse Characteristics



Capacitance v Reverse Voltage

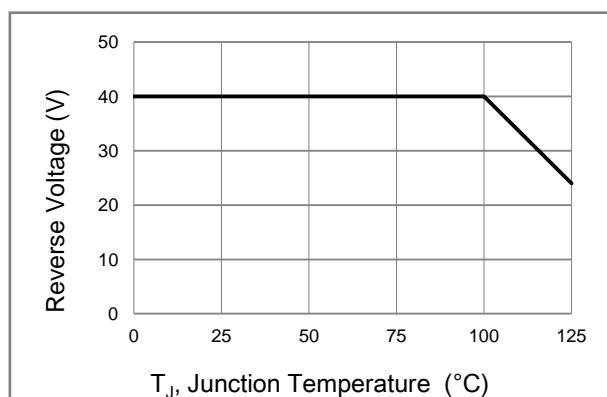


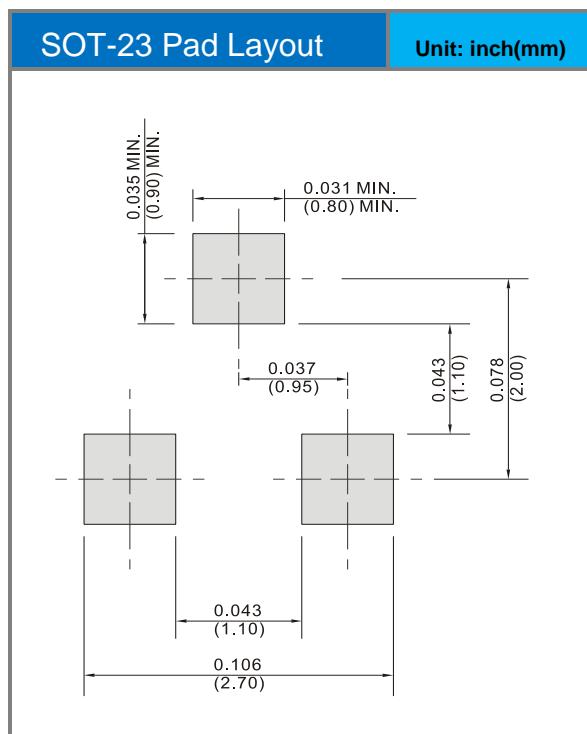
Fig.10 Operating Temperature Derating Curve

# BAT750

## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
BAT750	SOT-23	3K pcs / 7" reel	750
BAT750	SOT-23	12K pcs / 13" reel	750

## Mounting Pad Layout



## BAT750

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