

# BAT750

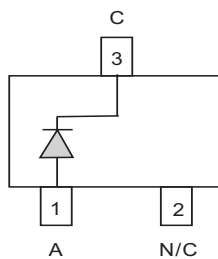
## SCHOTTKY BARRIER DIODE

### 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)

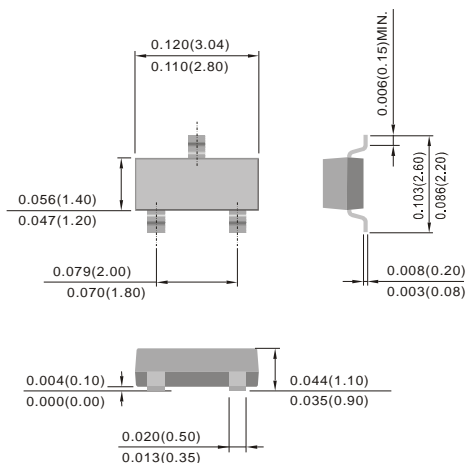
### MECHANICAL DATA

- 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	$V_{R(RMS)}$	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 $t \leq 100\mu s$ $t \leq 8.3ms$	$I_{FSM}$	12 5.5	A
Power dissipation@ $T_A=25^\circ C$	$P_{TOT}$	350	mW
Typical thermal resistance, junction to ambient air	$R_{\theta JA}$	286	$^\circ C/W$
Storage temperature range	$T_{STG}$	-55 to + 150	$^\circ C$
Junction temperature	$T_J$	125	$^\circ C$

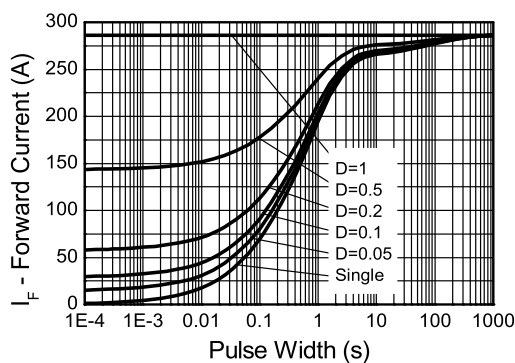
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## ELECTRICAL CHARACTERISTICS (@T<sub>A</sub>=25°C unless otherwise stated)

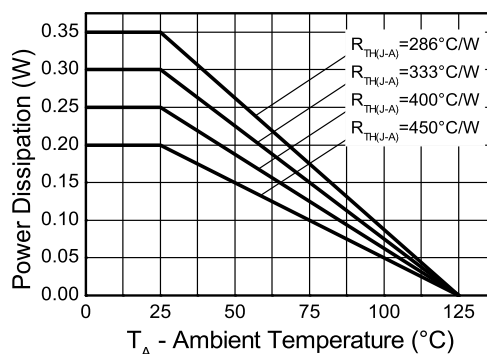
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse breakdown voltage	V <sub>(BR)R</sub>	I <sub>R</sub> =300μA	40	60	-	V
Forward voltage(Note 1)	V <sub>F</sub>	I <sub>F</sub> =50mA	-	250	280	mV
		I <sub>F</sub> =100mA	-	270	310	
		I <sub>F</sub> =250mA	-	310	350	
		I <sub>F</sub> =500mA	-	350	420	
		I <sub>F</sub> =750mA	-	390	490	
		I <sub>F</sub> =1000mA	-	420	540	
		I <sub>F</sub> =1500mA	-	490	650	
Reverse current	I <sub>R</sub>	V <sub>R</sub> =30V	-	50	100	μA
Off state junction capacitance	C <sub>J</sub>	V <sub>R</sub> =25V, f=1.0MHz	-	18	-	pF

Note : 1.Measured under pulsed conditions. Pulse width = 300μ duty cycle < 2%

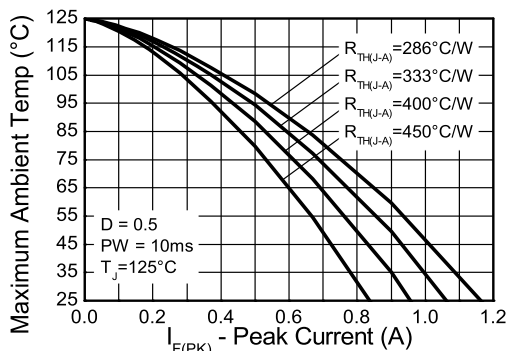
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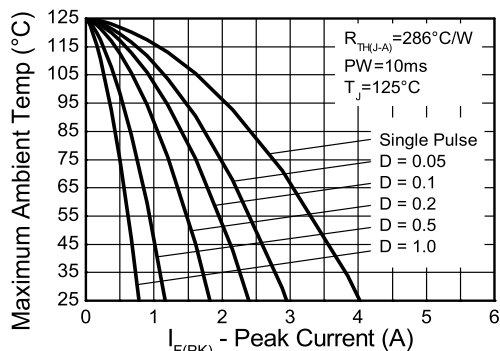
**Transient Thermal Impedance**



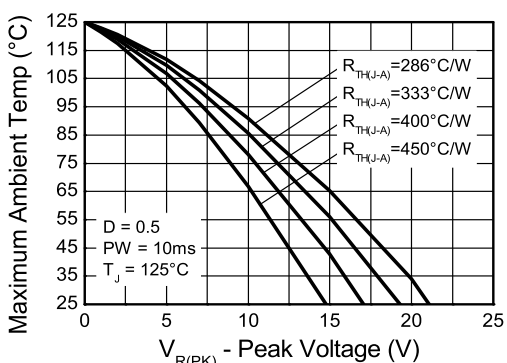
**Derating Curves**



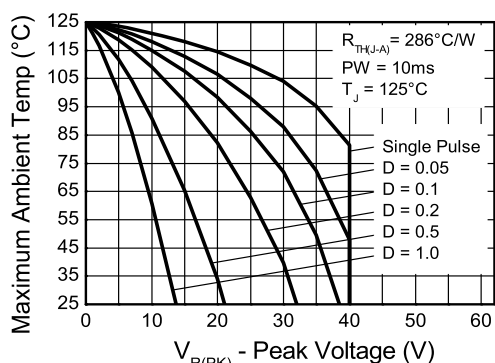
**Forward Safe Operating Area**



**Forward Safe Operating Area**

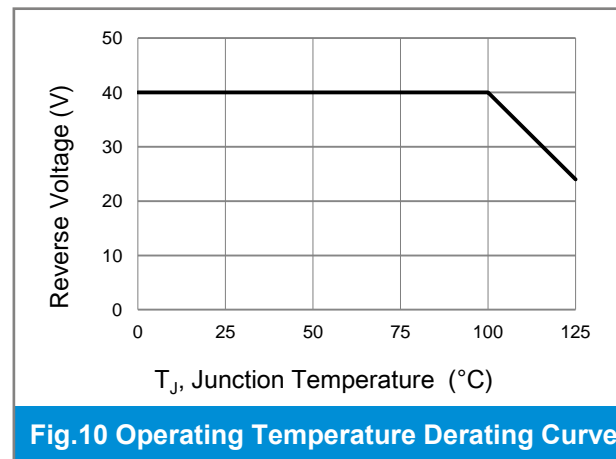
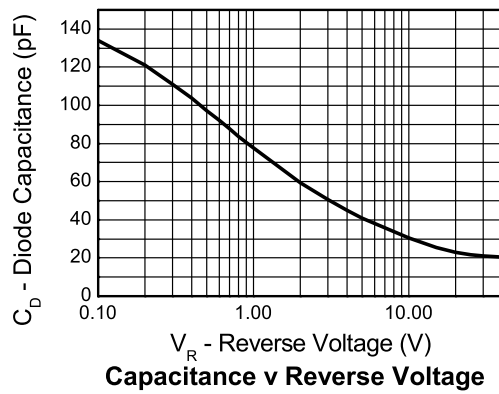
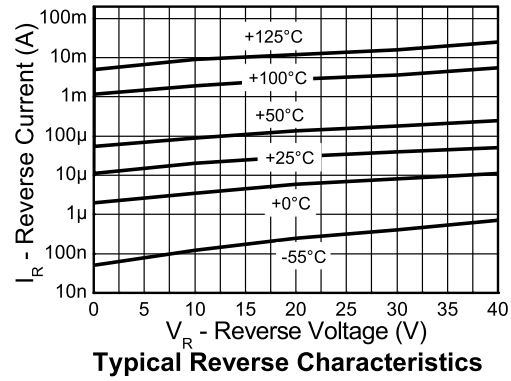
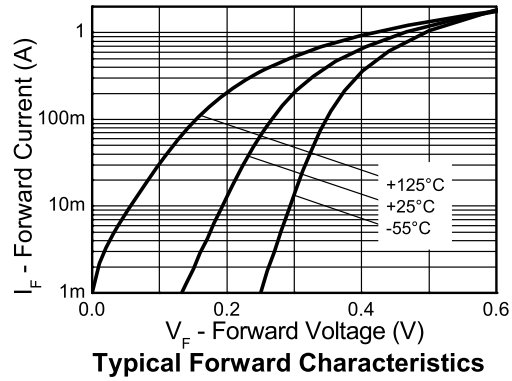


**Reverse Safe Operating Area**



**Reverse Safe Operating Area**

## BAT750

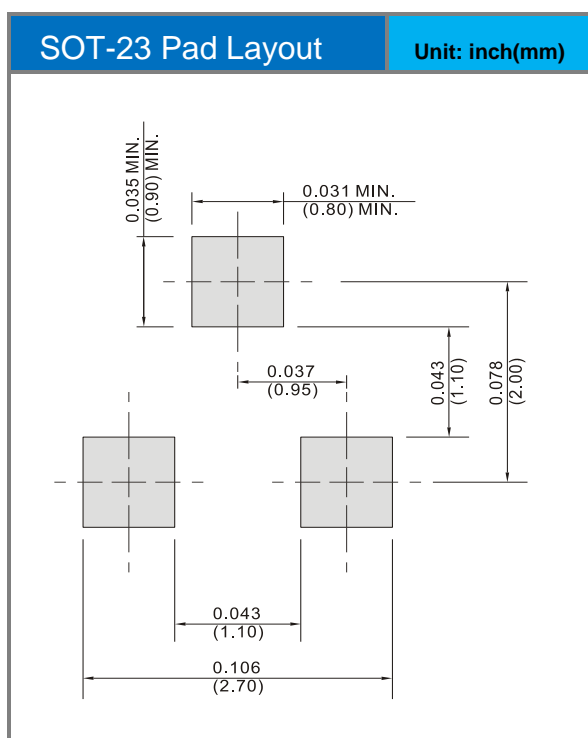


# BAT750

## 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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