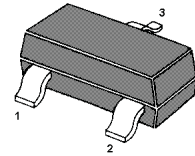
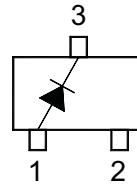


# BAT1000

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

- Very low forward voltage drop
- High conductance
- For use in DC-DC converter, PCMCIA and mobile telecommunications applications



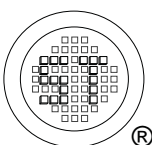
Marking Code: **K77**  
SOT-23 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Working Peak Reverse Voltage	$V_{RWM}$	40	V
DC Blocking Voltage	$V_R$	40	V
RMS Reverse Voltage	$V_{RMS}$	28	V
Average Rectified Forward Current	$I_{F(AV)}$	1	A
Non-repetitive Peak Forward Surge Current ( $t = 8.3 \text{ ms}$ )	$I_{FSM}$	5.5	A
Power Dissipation	$P_D$	500	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	200	$^\circ\text{C/W}$
Operating Temperature Range	$T_j$	- 40 to + 125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 40 to + 150	$^\circ\text{C}$

### Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown voltage at $I_R = 300 \mu\text{A}$	$V_{(BR)R}$	40	-	V
Forward voltage at $I_F = 50 \text{ mA}$ at $I_F = 100 \text{ mA}$ at $I_F = 250 \text{ mA}$ at $I_F = 500 \text{ mA}$ at $I_F = 750 \text{ mA}$ at $I_F = 1 \text{ A}$ at $I_F = 1.5 \text{ A}$	$V_F$	- - - - - - -	270 290 340 400 450 500 600	mV
Reverse current at $V_R = 30 \text{ V}$	$I_R$	-	100	$\mu\text{A}$
Total capacitance at $V_R = 0 \text{ V}$ , $f = 1 \text{ MHz}$ at $V_R = 25 \text{ V}$ , $f = 1 \text{ MHz}$	$C_T$	- -	175 25	pF



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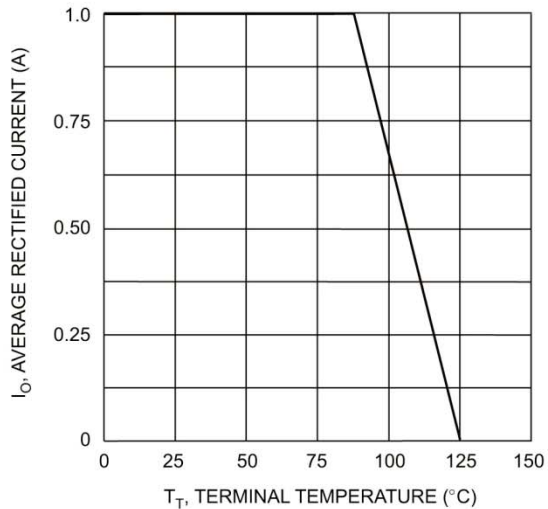


Fig. 1 Forward Current Derating Curve

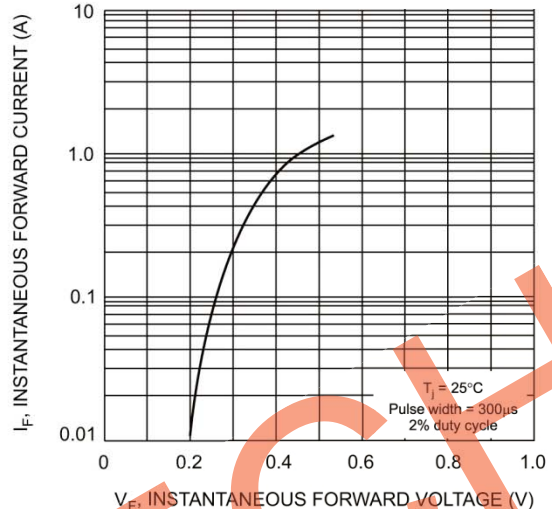


Fig. 2 Typical Forward Characteristics

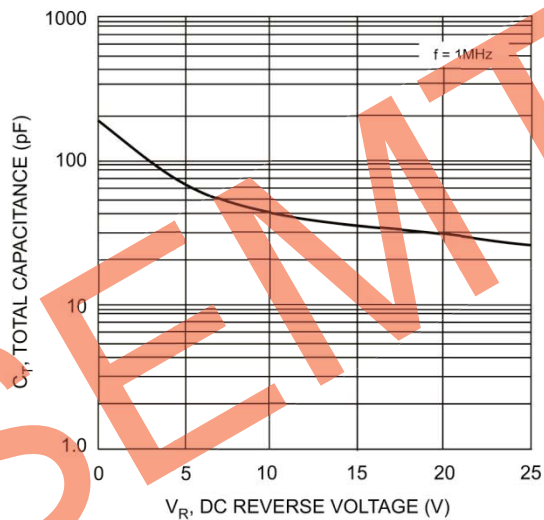


Fig. 3 Typ. Total Capacitance vs Reverse Voltage

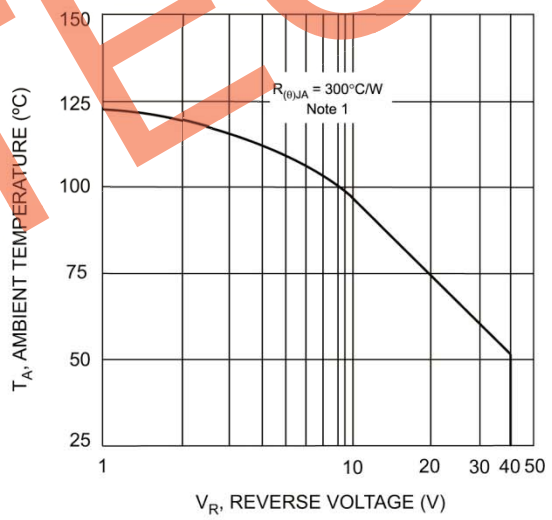


Fig. 4 Typical Safe Operating Area

