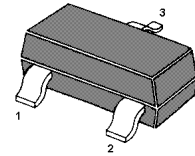
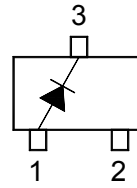


BAT1000

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 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	μA
Total capacitance at $V_R = 0 \text{ V}$, f = 1 MHz at $V_R = 25 \text{ V}$, f = 1 MHz	C_T	-	175 25	pF

BAT1000

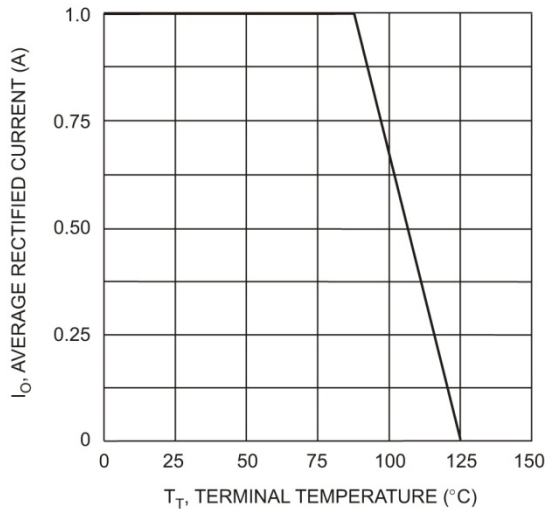


Fig. 1 Forward Current Derating Curve

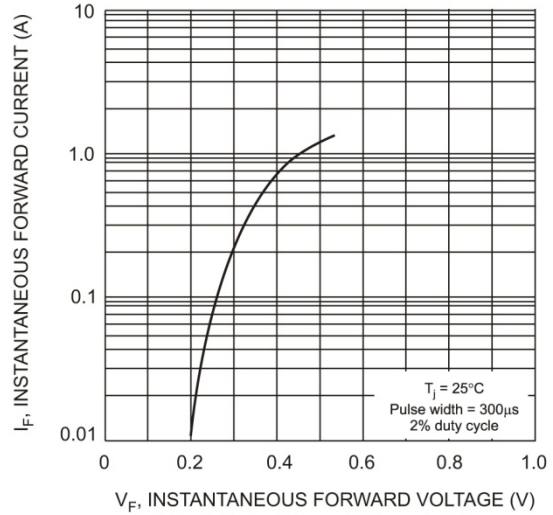


Fig. 2 Typical Forward Characteristics

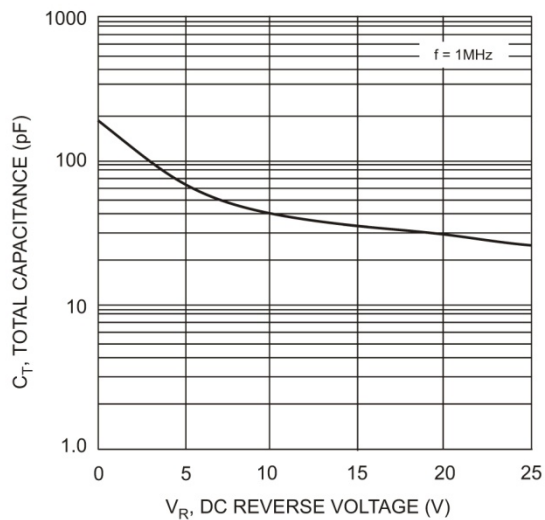


Fig. 3 Typ. Total Capacitance vs Reverse Voltage

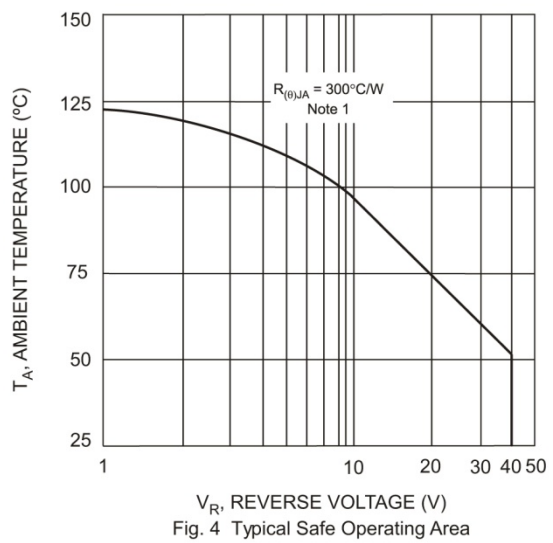


Fig. 4 Typical Safe Operating Area