

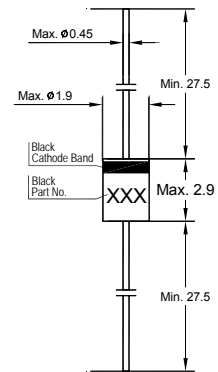
# BAT86

## SCHOTTKY BARRIER DIODE

Ultra high-speed switching, voltage clamping protection circuits and blocking applications

### Features

- Low forward voltage
- Hermetically-sealed leaded glass package



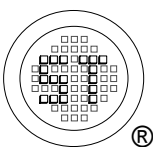
Glass Case DO-34  
Dimensions in mm

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

Parameter	Symbol	Value	Unit
Continuous Reverse Voltage	$V_R$	50	V
Continuous Forward Current	$I_F$	200	mA
Average Forward Current ( $V_{RWM} = 25\text{ V}$ , $T_{amb} = 50\text{ }^\circ\text{C}$ )	$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current (at $t_p \leq 1\text{ s}$ , $\delta \leq 0.5$ )	$I_{FRM}$	500	mA
Non-repetitive Peak Forward Current (at $t_p \leq 10\text{ ms}$ )	$I_{FSM}$	5	A
Operating Ambient Temperature Range	$T_{amb}$	- 65 to + 125	$^\circ\text{C}$
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{Stg}$	- 65 to + 150	$^\circ\text{C}$
Thermal Resistance from Junction to Ambient	$R_{thja}$	320	K/W

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

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 0.1\text{ mA}$	$V_F$	300	mV
at $I_F = 1\text{ mA}$	$V_F$	380	mV
at $I_F = 10\text{ mA}$	$V_F$	450	mV
at $I_F = 30\text{ mA}$	$V_F$	600	mV
at $I_F = 100\text{ mA}$	$V_F$	900	mV
Reverse Current at $V_R = 40\text{ V}$	$I_R$	5	$\mu\text{A}$
Diode Capacitance at $V_R = 1\text{ V}$ , $f = 1\text{ MHz}$	$C_d$	8	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$ , $I_R = 10\text{ mA}$ , $R_L = 100\text{ }\Omega$	$t_{rr}$	4	ns



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Fig.1 Derating curve.

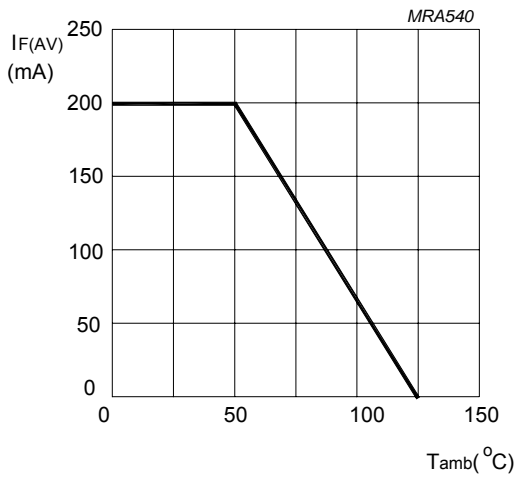


Fig.2 Forward current as a function of forward voltage; typical values.

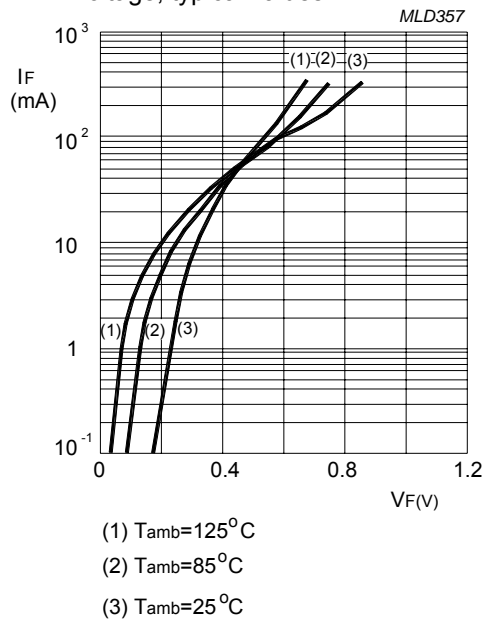


Fig.3 Reverse current as a function of reverse voltage; typical values.

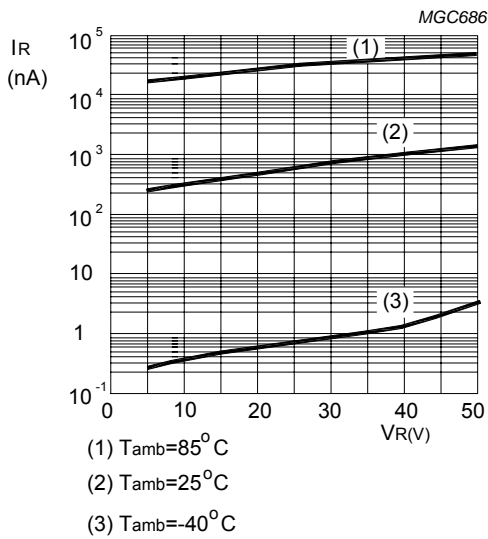


Fig.4 Diode capacitance as a function of reverse voltage; typical values.

