

# BAS86

Small Signal Schottky Diode

**VOLTAGE RANGE: 50 V**

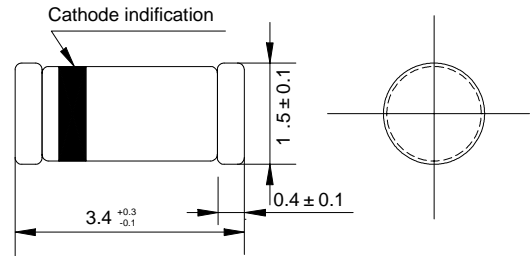
**CURRENT: 0.2 A**

**Mini-melf**



## Features

- ◇ For general purpose applications
- ◇ This diode features very low turn-on voltage and fast switching. These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges



Dimensions in millimeters

## Mechanical Data

- ◇ Case: JEDEC mini-melf, glass case
- ◇ Polarity: Color band denotes cathode end
- ◇ Weight: Approx. 0.031 grams

## ABSOLUTE RATINGS

	Symbols	Value	UNITS
Continuous reverse voltage	$V_R$	50	V
Forward continuous current @ $T_A=25^\circ\text{C}$	$I_F$	200 <sup>1)</sup>	mA
Peak forward current @ $T_A=25^\circ\text{C}$	$I_{FM}$	500 <sup>1)</sup>	mA
Surge forward current @ $t_p < 1\text{s}, T_A=25^\circ\text{C}$	$I_{FSM}$	5 <sup>1)</sup>	A
Power dissipation @ $T_A=65^\circ\text{C}$	$P_{tot}$	200 <sup>1)</sup>	mW
Junction temperature	$T_J$	125	$^\circ\text{C}$
Ambient operating temperature range	$T_A$	-55 ---+ 125	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 ---+ 150	$^\circ\text{C}$

1) Valid provided that leads at a distance of 4mm from case are kept at ambient temperature

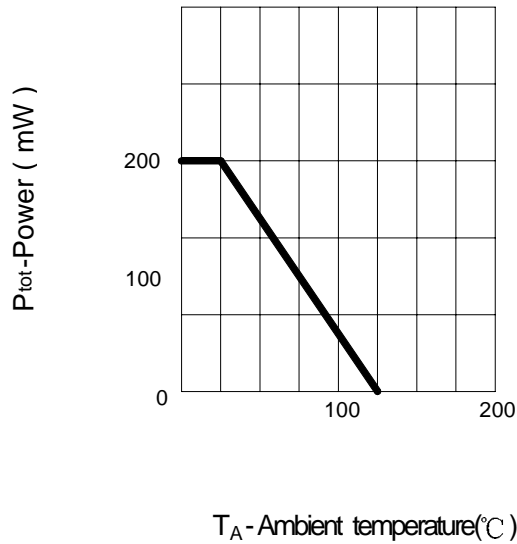
## ELECTRICAL CHARACTERISTICS

	Symbols	Min.	Typ.	Max.	UNITS
Reverse breakdown voltage	$V_R$	50.0			V
Forward voltage Pulse test $t_p < 300 \mu\text{s}, \delta < 2\%$ @ $I_F=0.1\text{mA}$ @ $I_F=1\text{mA}$ @ $I_F=10\text{mA}$ @ $I_F=30\text{mA}$ @ $I_F=100\text{mA}$	$V_F$			0.30 0.38 0.45 0.60 0.90	V V V V V
Leakage current $V_R=40\text{V}$	$I_R$			5.0	$\mu\text{A}$
Diode capacitance at $V_R=1\text{V}, f=1\text{MHz}$	$C_d$			8	pF
Reverse recovery time @ $I_F=10\text{mA}, I_R=10\text{mA}, I_R=1\text{mA}$	$t_{rr}$			5	ns
Thermal resistance junction to ambient	$R_{\theta JA}$			430 <sup>1)</sup>	$^\circ\text{C/W}$

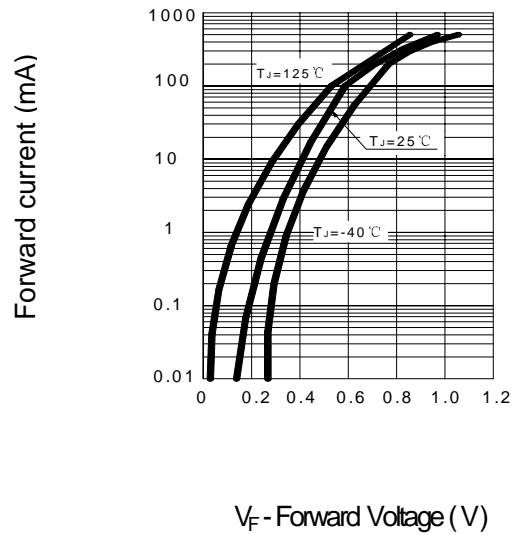
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## Ratings AND Characteristic Curves

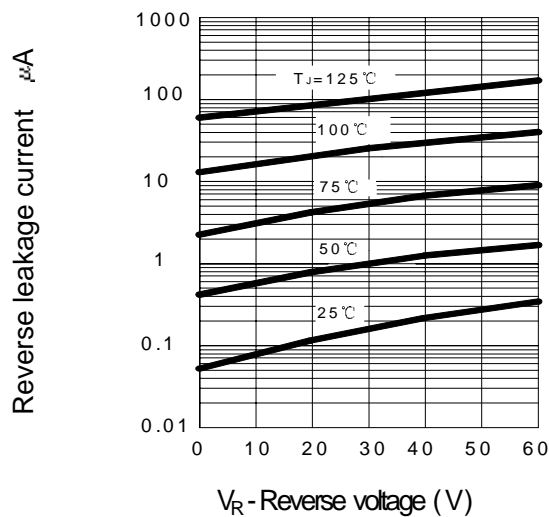
**FIG.1 – ADMISSIBLE POWER DISSIPATION VS. AMBIENT TEMPERATURE**



**FIG. 2 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 3 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**

