

# BAT41

Small Signal Schottky Diodes

**VOLTAGE RANGE: 100 V**

**CURRENT: 100 mA**



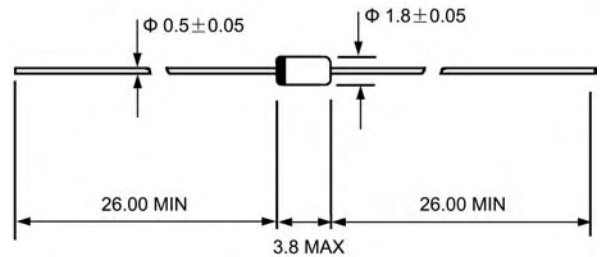
## Features

- ◇ 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

## Mechanical Data

- ◇ Case: JEDEC DO-35, glass case
- ◇ Polarity: Color band denotes cathode end
- ◇ Weight: Approx. 0.13 gram

## DO - 35(GLASS)



Dimensions in millimeters

## ABSOLUTE RATINGS

	Symbols	Value	UNITS
Continuous reverse voltage	$V_{RRM}$	100	V
Forward continuous current @ $T_A=25^\circ\text{C}$	$I_F$	100 <sup>1)</sup>	mA
Repetitive peak forward current $t_p$ 1s, 0.5	$I_{FRM}$	350 <sup>1)</sup>	mA
Surge forward current @ $t_p$ 10ms	$I_{FSM}$	750 <sup>1)</sup>	mA
Power dissipation @ $T_A=95^\circ\text{C}$	$P_{tot}$	100 <sup>1)</sup>	mW
Junction temperature	$T_J$	-55 ----+ 125	$^\circ\text{C}$
Ambient operating temperature range	$T_L$	230	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 ----+ 150	$^\circ\text{C}$

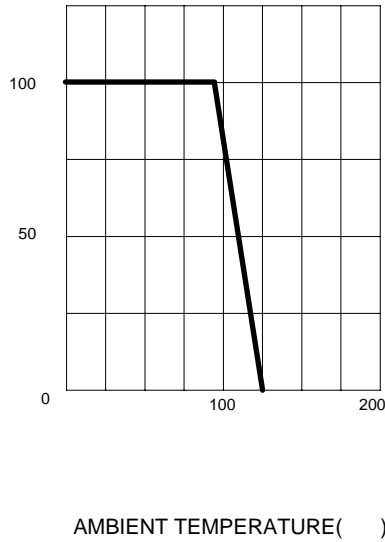
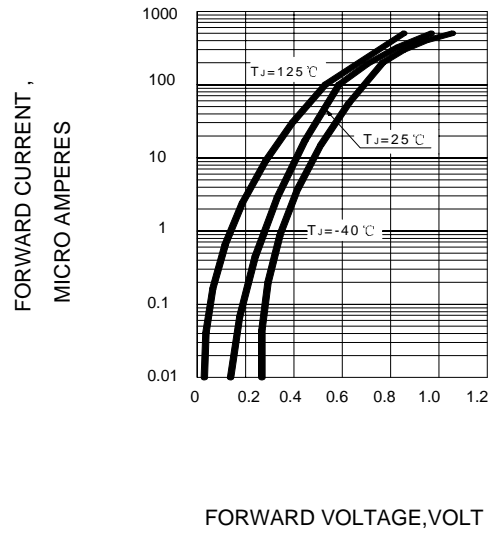
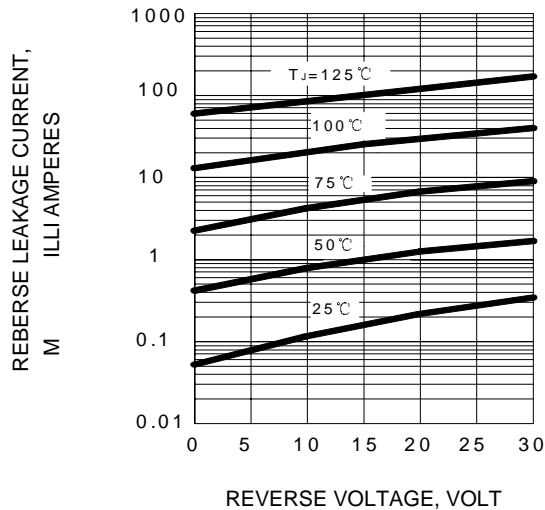
1) On infinite heatsink with 4mm lead length.

## ELECTRICAL CHARACTERISTICS

	Symbols	Min.	Typ.	Max.	UNITS
Reverse breakdown voltage @ $I_R=100\mu\text{A}, T_J=25^\circ\text{C}$	$V_{BR}$	100	-	-	V
Forward voltage @ $I_F=1\text{mA}, T_J=25^\circ\text{C}$	$V_F$	-	0.4	0.45	V
@ $I_F=200\text{mA}, T_J=25^\circ\text{C}$		-	-	1.0	
Leakage current @ $T_J=25^\circ\text{C}$	$I_R$	-	-	0.1	$\mu\text{A}$
$V_R=50\text{V}$ @ $T_J=100^\circ\text{C}$		-	-	20	
Junction capacitance at $V_R=1\text{V}, f=1\text{MHz}$	$C_J$	-	-	20	pF
Thermal resistance junction to ambient	$R_{\theta JA}$	-	-	300 <sup>1)</sup>	$^\circ\text{C/W}$

2) Pulse test  $t_p < 300\mu\text{s}$ ,  $\delta < 2\%$

## Ratings AND Characteristic Curves

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

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

**FIG.3 – TYPICAL REVERSE CHARACTERISTICS**

**FIG4 – TYPICAL JUNCTION CAPACITANCE**
