

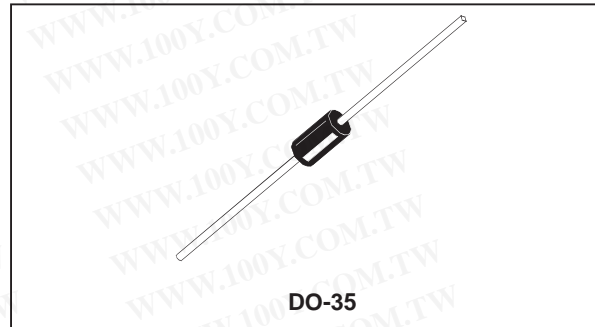


**BAT41**

**SMALL SIGNAL SCHOTTKY DIODE**

**DESCRIPTION**

General purpose metal to silicon diode featuring very low turn-on voltage and fast switching. This device has integrated protection against excessive voltage such as electrostatic discharges.



**ABSOLUTE RATINGS** (limiting values)

Symbol	Parameter	Value	Unit
$V_{RRM}$	Repetitive Peak Reverse Voltage	100	V
$I_F$	Forward Continuous Current*	$T_a = 25^\circ\text{C}$ 100	mA
$I_{FRM}$	Repetitive Peak Forward Current*	$t_p \leq 1\text{s}$ $\delta \leq 0.5$ 350	mA
$I_{FSM}$	Surge non Repetitive Forward Current*	$t_p \leq 10\text{ms}$ 750	mA
$P_{tot}$	Power Dissipation*	$T_a = 95^\circ\text{C}$ 100	mW
$T_{stg}$ $T_j$	Storage and Junction Temperature Range	- 65 to +150 - 65 to +125	$^\circ\text{C}$ $^\circ\text{C}$
$T_L$	Maximum Lead Temperature for Soldering during 10s at 4mm from Case	230	$^\circ\text{C}$

**THERMAL RESISTANCE**

Symbol	Test Conditions	Value	Unit
$R_{th(j-a)}$	Junction-ambient*	300	$^\circ\text{C/W}$

**ELECTRICAL CHARACTERISTICS**

**STATIC CHARACTERISTICS**

Symbol	Test Conditions	Min.	Typ.	Max.	Unit
$V_{BR}$	$T_j = 25^\circ\text{C}$ $I_R = 100\mu\text{A}$	100			V
$V_F^{**}$	$T_j = 25^\circ\text{C}$ $I_F = 1\text{mA}$		0.4	0.45	V
	$T_j = 25^\circ\text{C}$ $I_F = 200\text{mA}$			1	V
$I_R^{**}$	$T_j = 25^\circ\text{C}$ $T_j = 100^\circ\text{C}$			0.1	$\mu\text{A}$
	$V_R = 50\text{V}$			20	$\mu\text{A}$

**DYNAMIC CHARACTERISTICS**

Symbol	Test Conditions	Min.	Typ.	Max.	Unit
C	$T_j = 25^\circ\text{C}$ $V_R = 1\text{V}$ $f = 1\text{MHz}$		2		pF

\* On infinite heatsink with 4mm lead length  
 \*\* Pulse test:  $t_p \leq 300\mu\text{s}$   $\delta < 2\%$ .

Fig. 1: Forward current versus forward voltage at different temperatures (typical values).

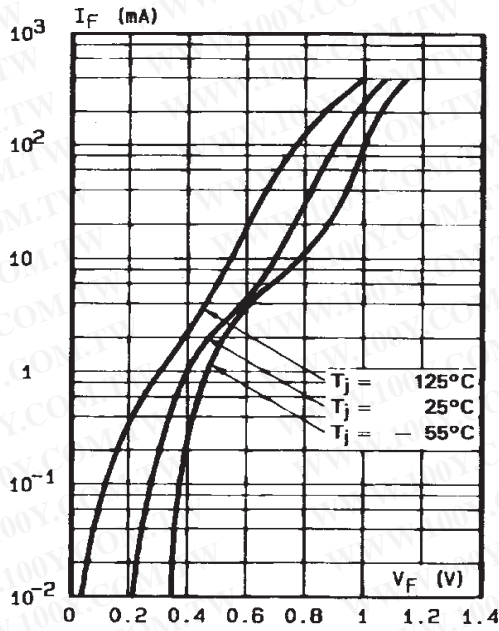


Fig. 2: Forward current versus forward voltage (typical values).

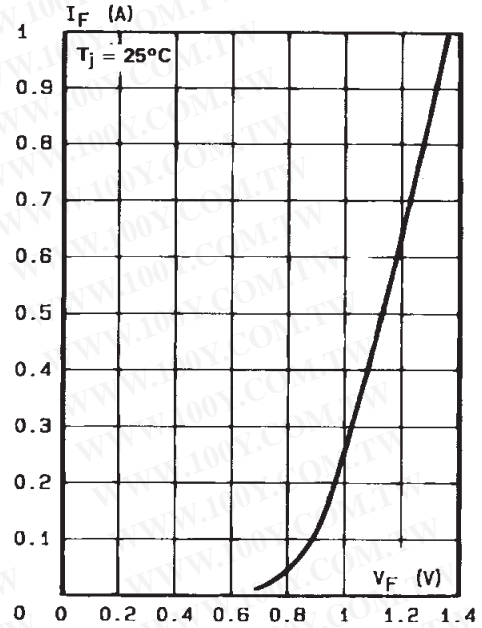


Fig. 3: Reverse current versus junction temperature.

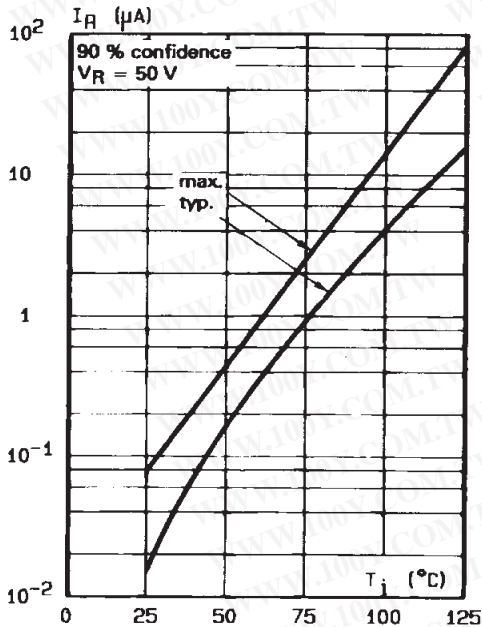


Fig. 4: Reverse current versus continuous reverse voltage (typical values).

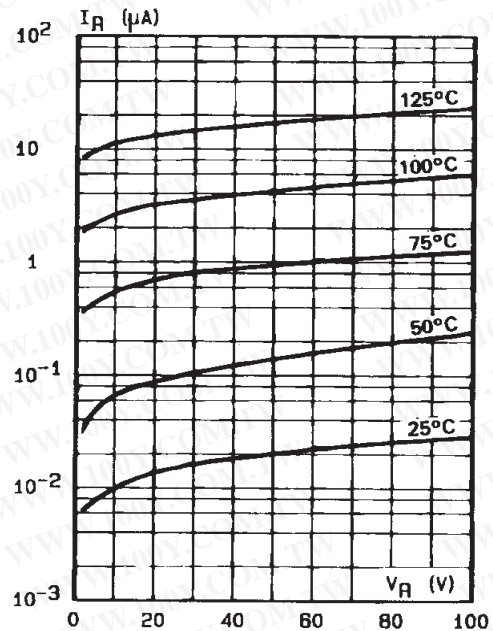
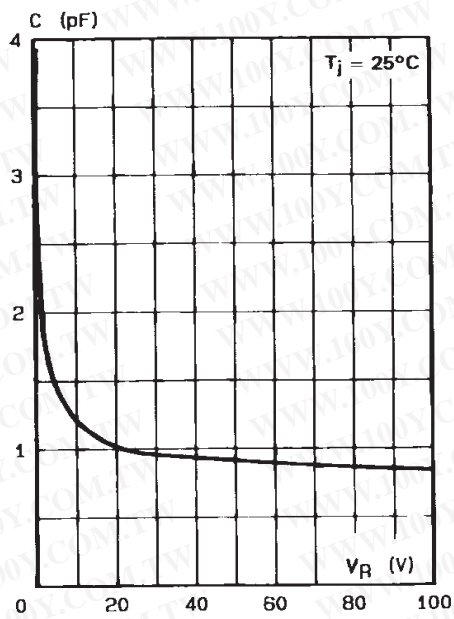


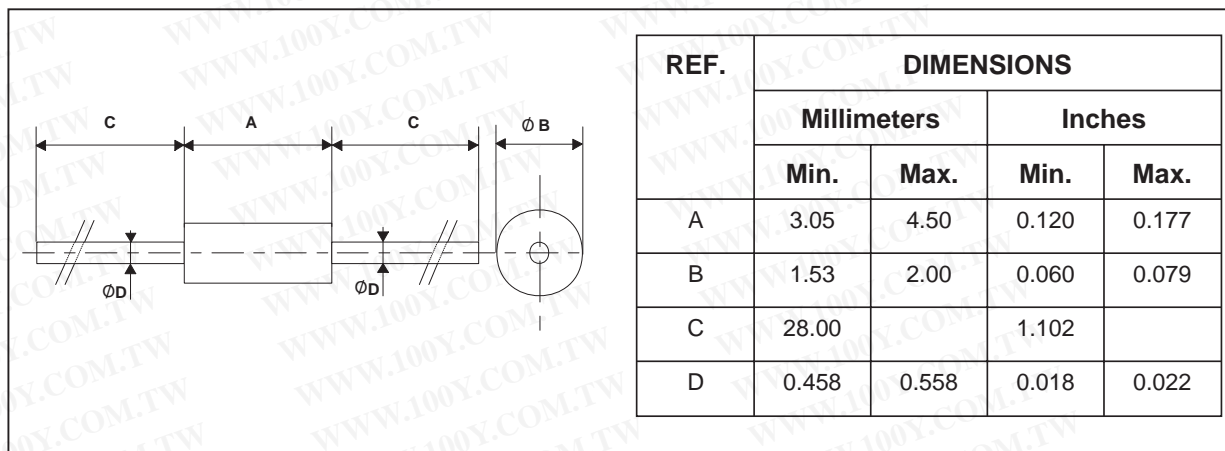
Fig. 5: Capacitance  $C$  versus reverse applied voltage  $V_R$  (typical values).



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# BAT41

## PACKAGE MECHANICAL DATA DO-35



Cooling method : by convection and conduction  
 Marking: clear, ring at cathode end.  
 Weight: 0.15g

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