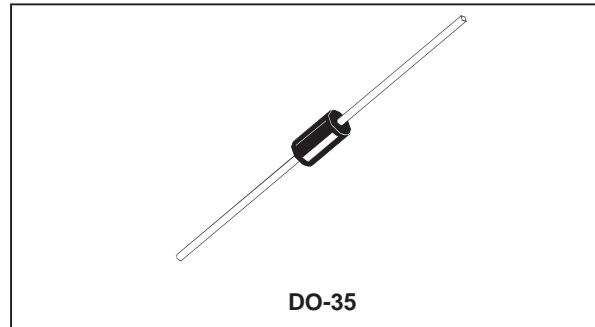


## SMALL SIGNAL SCHOTTKY DIODE

### 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	
$I_R^{**}$	$T_j = 25^\circ\text{C}$ $T_j = 100^\circ\text{C}$			0.1 20	$\mu\text{A}$
				$V_R = 50\text{V}$	

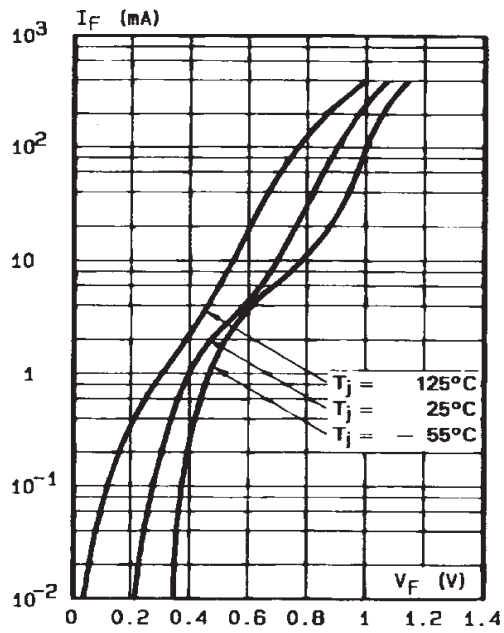
#### DYNAMIC CHARACTERISTICS

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

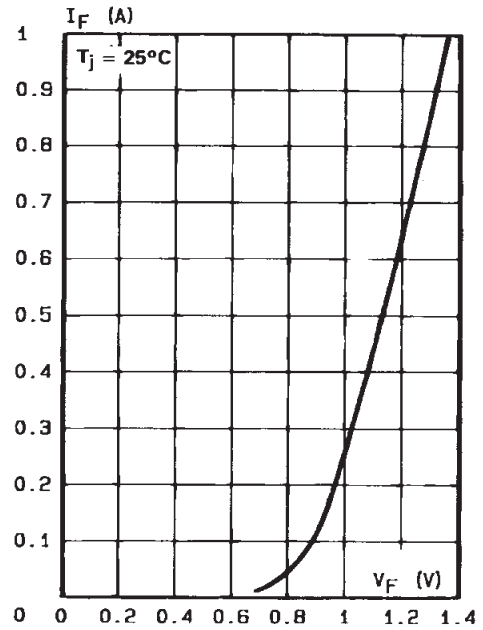
\* On infinite heatsink with 4mm lead length

\*\* Pulse test:  $t_p \leq 300\mu\text{s}$   $\delta < 2\%$ .

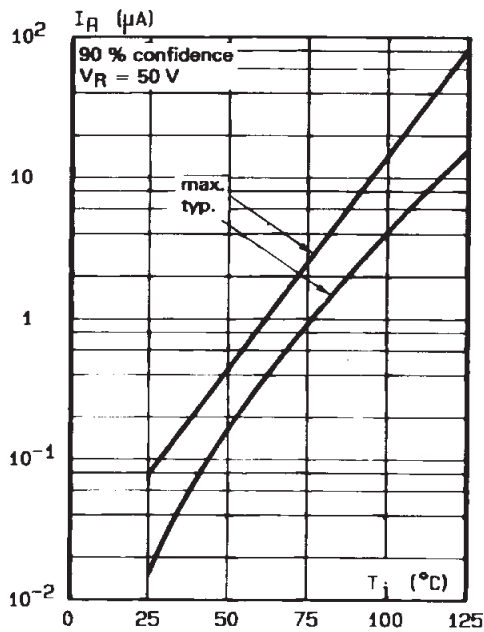
**Fig. 1:** Forward current versus forward voltage at different temperatures (typical values).



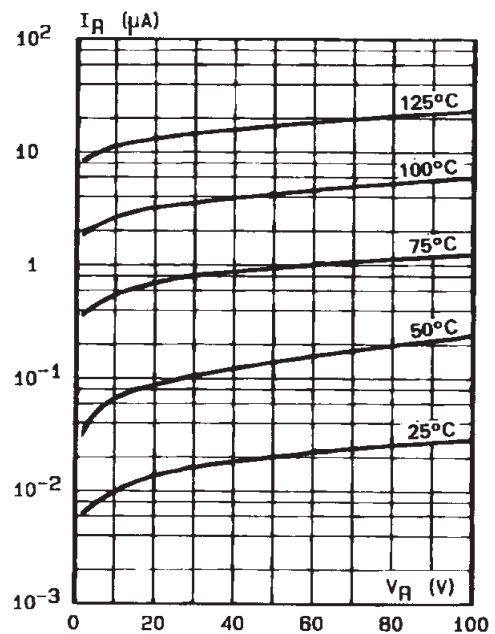
**Fig. 2:** Forward current versus forward voltage (typical values).



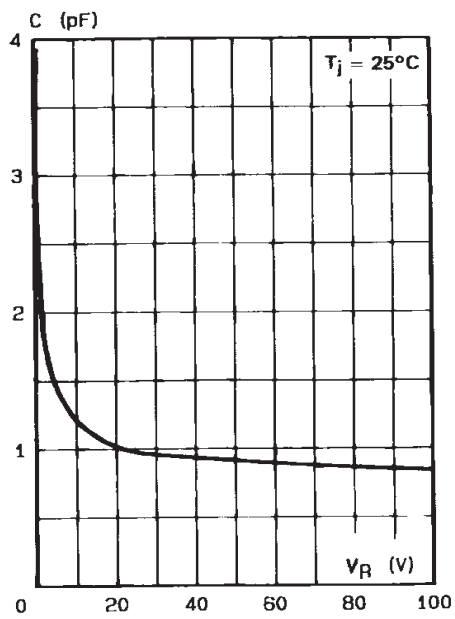
**Fig. 3:** Reverse current versus junction temperature.



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



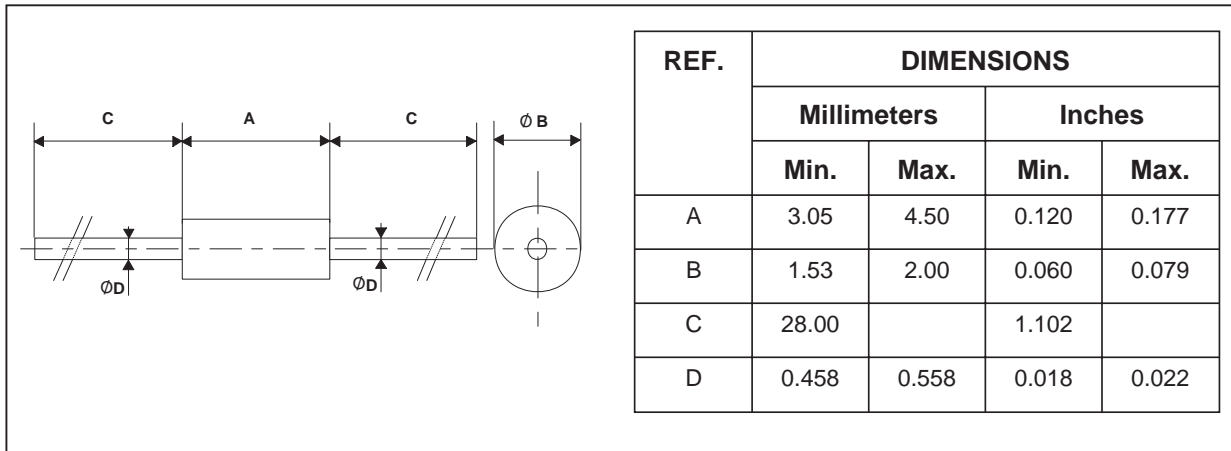
**Fig. 5:** Capacitance  $C$  versus reverse applied voltage  $V_R$  (typical values).



# 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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