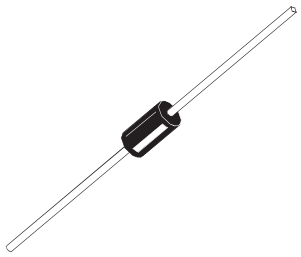
BAT41

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.



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ABSOLUTE RATINGS (limiting values)

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

THERMAL RESISTANCE

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

ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
V_{BR}	T_j = 25°C	I_R = 100µA	100			V
V_F * *	T_j = 25°C	I_F = 1mA		0.4	0.45	V
	T_j = 25°C	I_F = 200mA			1	
I_R * *	T_j = 25°C	V_R = 50V			0.1	µA
	T_j = 100°C				20	

DYNAMIC CHARACTERISTICS

Symbol	Test Conditions			Min.	Typ.	Max.	Unit
C	T_j = 25°C	V_R = 1V	f = 1MHz		2		pF

* On infinite heatsink with 4mm lead length

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

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

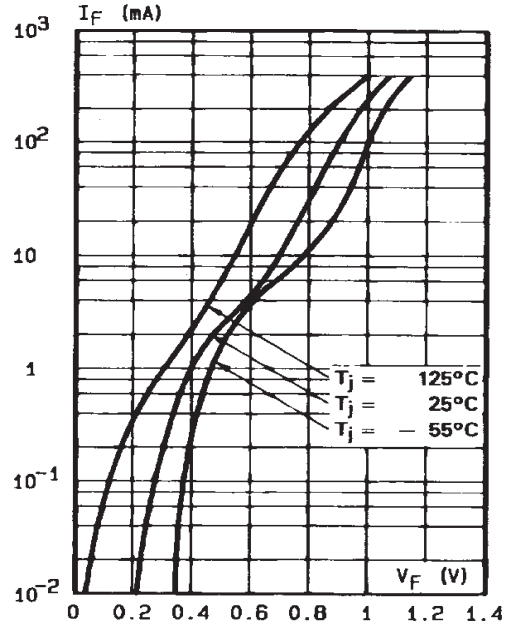


Fig. 2: Forward current versus forward voltage (typical values).

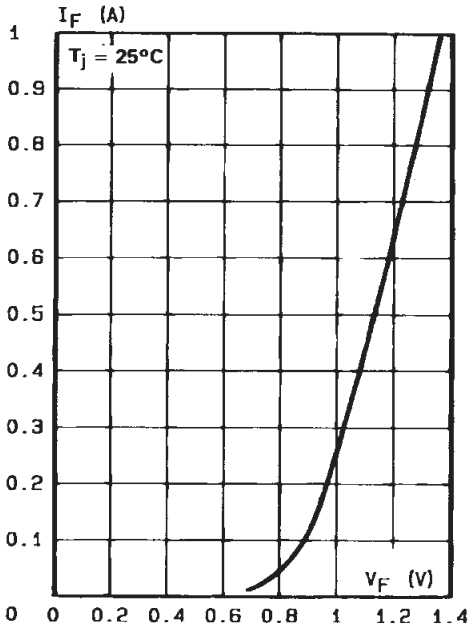


Fig. 3: Reverse current versus junction temperature.

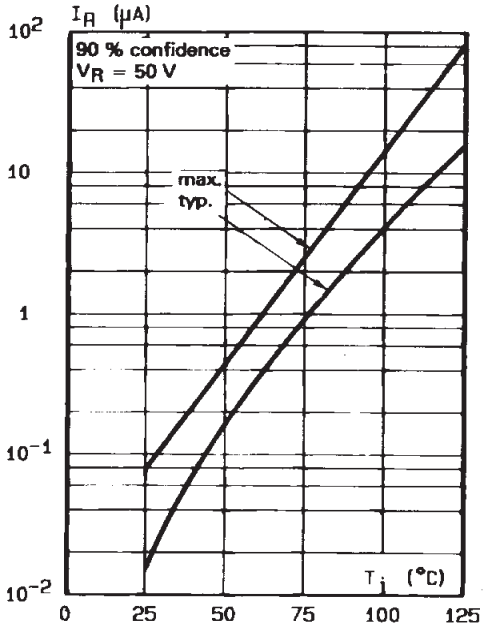


Fig. 4: Reverse current versus continuous reverse voltage (typical values).

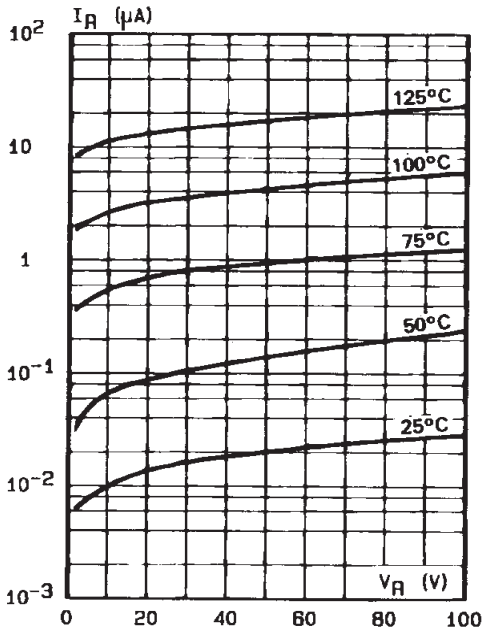
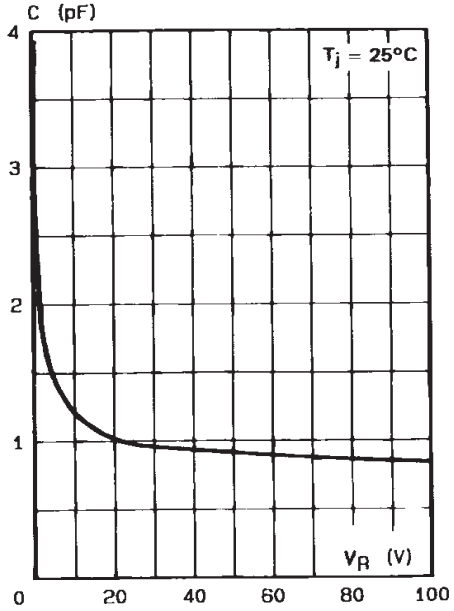


Fig. 5: Capacitance C versus reverse applied voltage V_R (typical values).



PACKAGE MECHANICAL DATA

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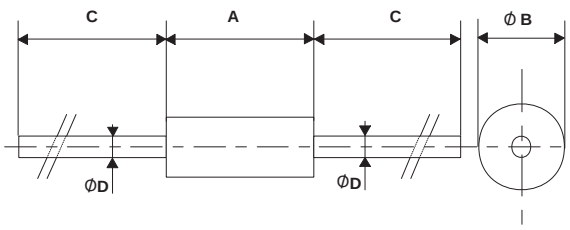

REF.	DIMENSIONS			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.05	4.50	0.120	0.177
B	1.53	2.00	0.060	0.079
C	28.00		1.102	
D	0.458	0.558	0.018	0.022

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