



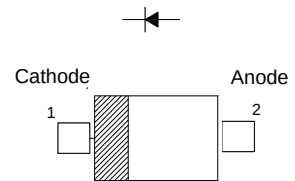
BAT42W/BAT43W SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

- Low Forward Voltage Drop
- Fast Switching

Marking Code: BAT42W: **PX**

BAT43W: **PY**



SOD-123

Absolute Maximum Ratings ($T_a = 25\text{ }^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Reverse Voltage	V_R	30	V
Forward Continuous Current	I_{FM}	200	mA
Repetitive Peak Forward Current at $t < 1\text{ s}$	I_{FRM}	500	mA
Non-repetitive Peak Forward Surge Current at $t < 10\text{ ms}$	I_{FSM}	0.8	A
Power Dissipation	P_{tot}	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{Stg}	- 55 to + 125	$^{\circ}\text{C}$

Characteristics at $T_a = 25\text{ }^{\circ}\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	30	-	V
Reverse Current at $V_R = 25\text{ V}$	I_R	-	500	nA
Forward Voltage at $I_F = 200\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 50\text{ mA}$ at $I_F = 2\text{ mA}$ at $I_F = 15\text{ mA}$	V_F	- - - 0.26 -	1 0.4 0.65 0.33 0.45	V V V V V
Total Capacitance at $V_R = 1\text{ V}$, $f = 1\text{ MHz}$	C_T	-	10	pF
Reverse Recovery Time at $I_F = I_R = 10\text{ mA}$, $I_{rr} = 0.1 \times I_R$, $R_L = 100\text{ }\Omega$	t_{rr}	-	5	ns

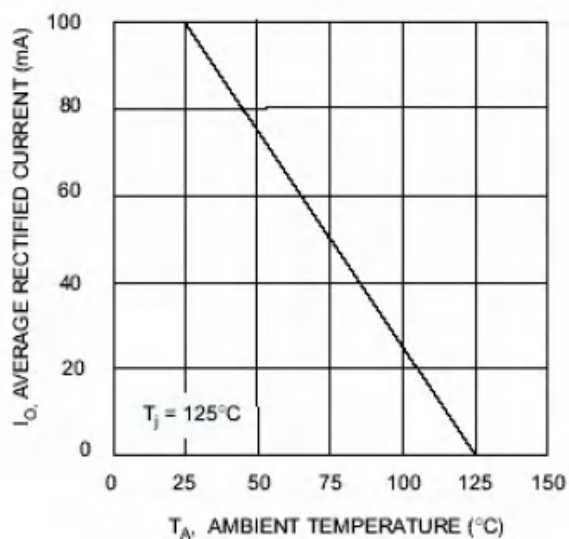


Fig. 1 Forward Current Derating Curve

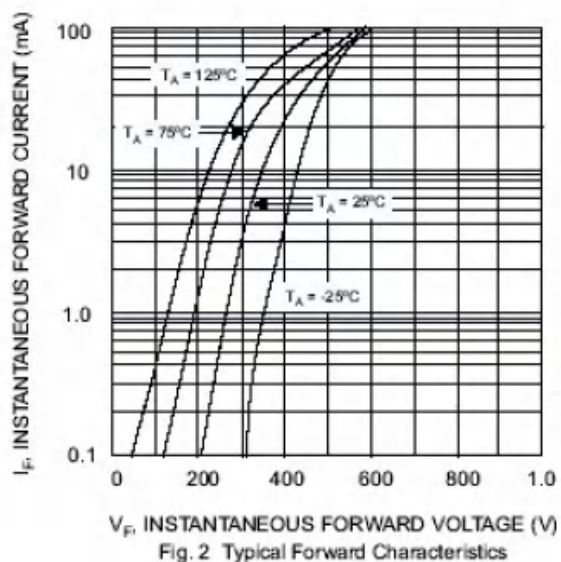


Fig. 2 Typical Forward Characteristics

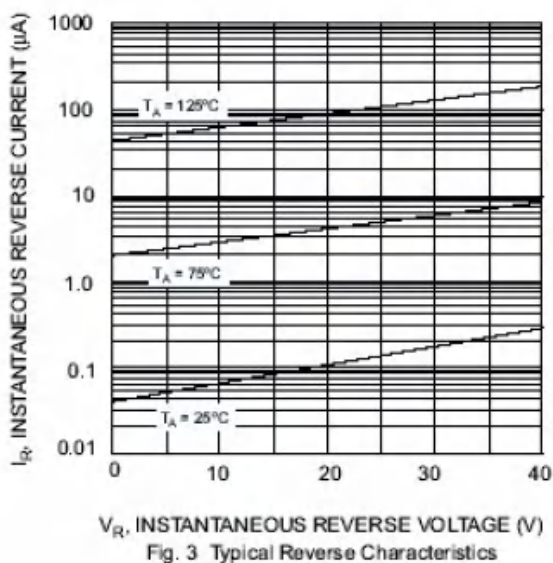


Fig. 3 Typical Reverse Characteristics

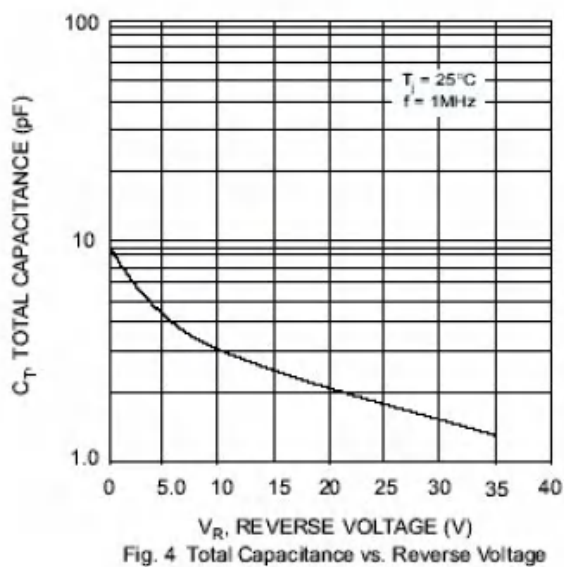


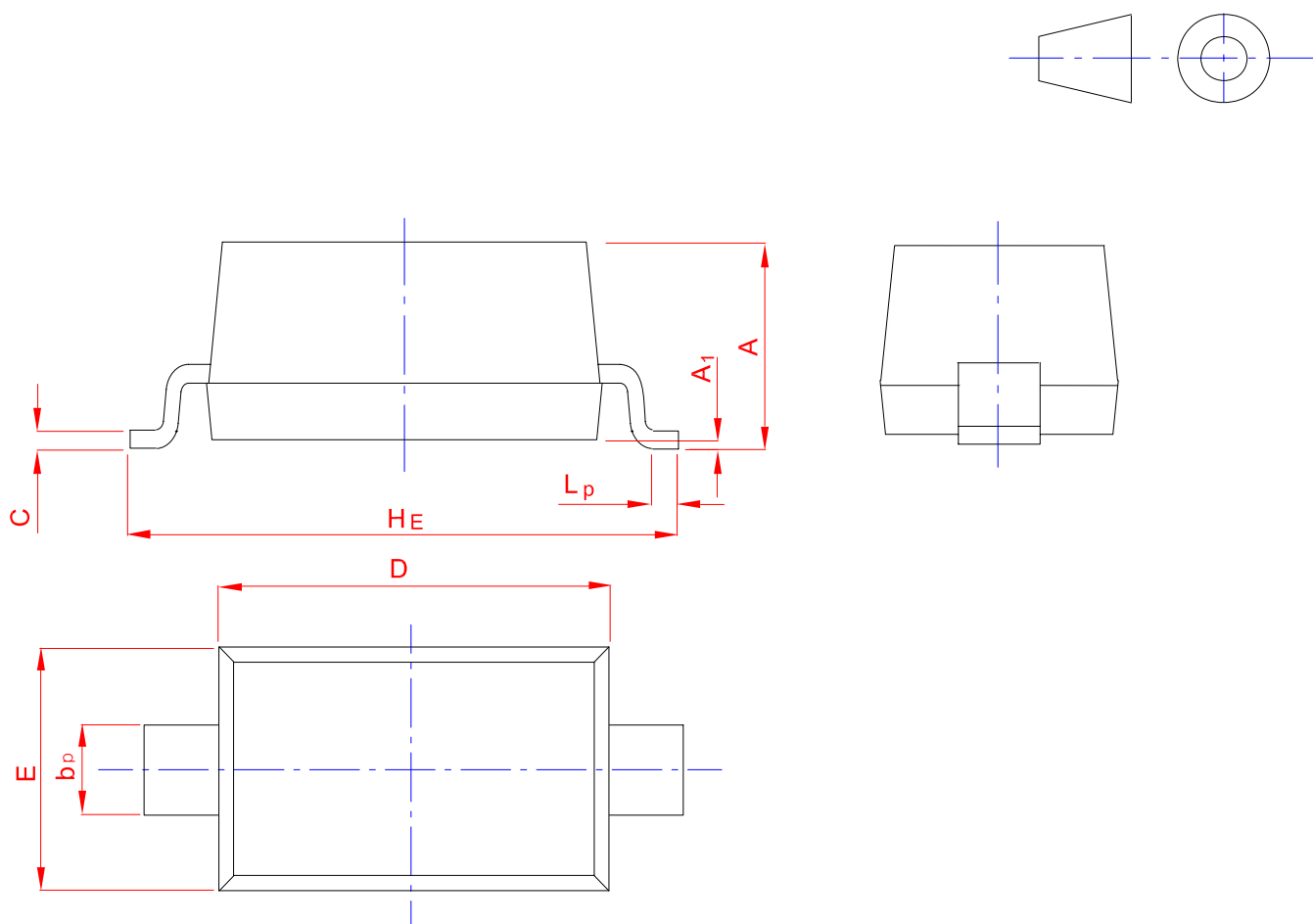
Fig. 4 Total Capacitance vs. Reverse Voltage



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	b_p	C	D	E	H_E	A_1	L_p
mm	1.20 0.90	0.60 0.50	0.135 0.100	2.75 2.55	1.65 1.55	3.85 3.55	0.10 0.01	0.50 0.20