BAT42W/BAT43W

Surface Mount Schottky Barrier Rectifiers

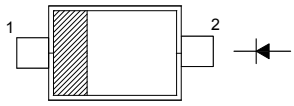
Datasheet

Features

- Low Forward Voltage Drop
- Fast Switching

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View

Simplified outline SOD-123 and symbol

Absolute Maximum Ratings (T_a = 25 °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 s	I_{FRM}	500	mA
Non-repetitive Peak Forward Surge Current at t < 10 ms	I_{FSM}	2	A
Power Dissipation	P_{tot}	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	°C/W
Operating and Storage Temperature Range	T_J, T_{Stg}	- 55 to + 125	°C

Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at I_R = 100 µA		$V_{(BR)R}$	30	-	V
Reverse Current at V_R = 25 V		I_R	-	500	nA
Forward Voltage		V_F			
at I_F = 200 mA			-	1	V
at I_F = 10 mA	BAT42W		-	0.4	V
at I_F = 50 mA	BAT42W		-	0.65	V
at I_F = 2 mA	BAT43W		0.26	0.33	V
at I_F = 15 mA	BAT43W		-	0.45	V
Total Capacitance at V_R = 1 V, f = 1 MHz		C_T	-	10	pF
Reverse Recovery Time at I_F = I_R = 10 mA, I_{rr} = 0.1 X I_R, R_L = 100 Ω		t_{rr}	-	5	ns

Typical Characteristics

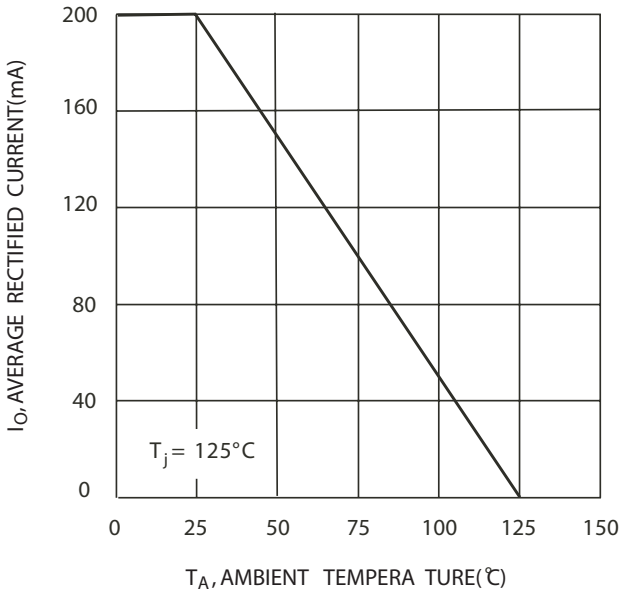


FIG. 1 Forward Current Derating Curve

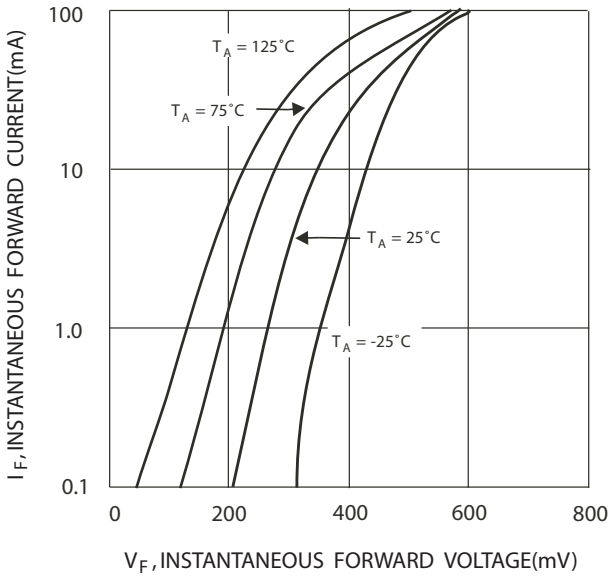


FIG. 2 Typical Forward Characteristics

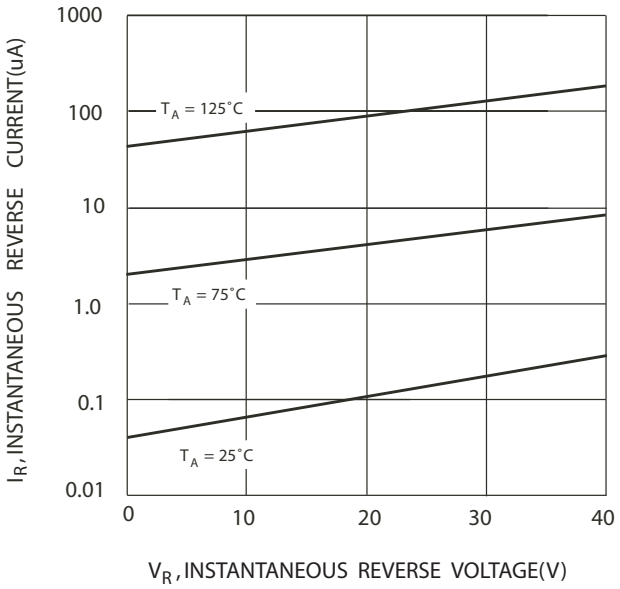


FIG. 3 Typical Reverse Characteristics

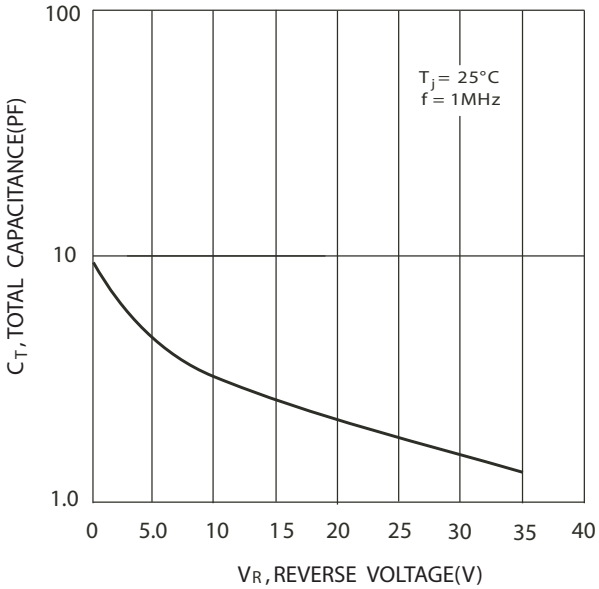
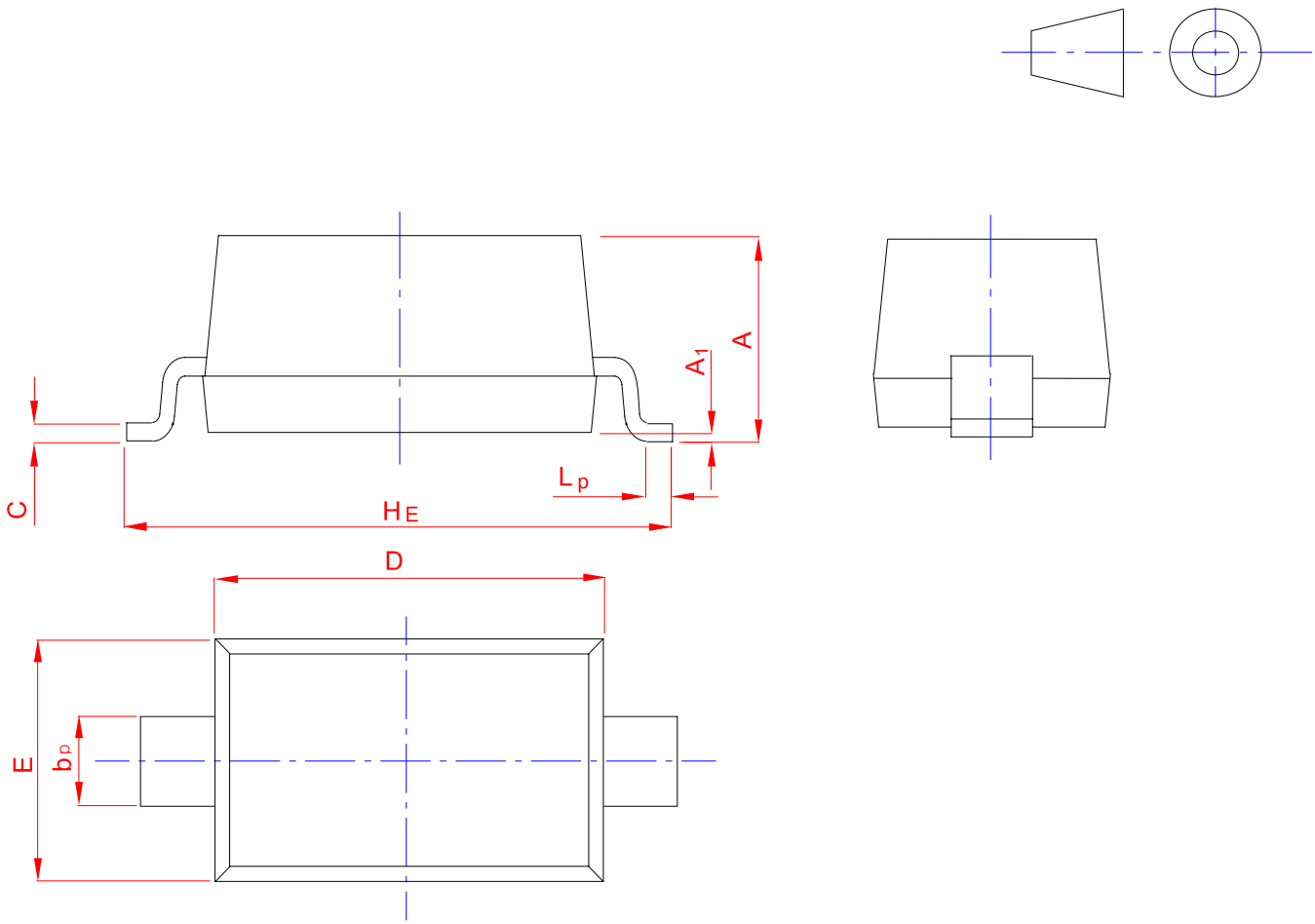


FIG. 4 Total Capacitance vs. Reverse Voltage

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