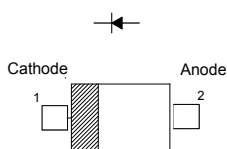


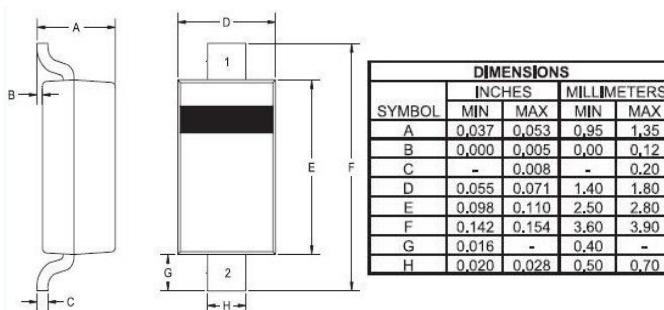
Features

- Low Forward Voltage Drop
- Fast Switching



SOD-123

SOD123



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

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 $t < 1$ s	I_{FRM}	500	mA
Non-repetitive Peak Forward Surge Current at $t < 10$ 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	$^\circ\text{C}$

BAT42W/BAT43W

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 $I_F = 200\text{ mA}$	V_F	-	1	V
at $I_F = 10\text{ mA}$ BAT42W		-	0.4	V
at $I_F = 50\text{ mA}$ BAT42W		-	0.65	V
at $I_F = 2\text{ mA}$ BAT43W		0.26	0.33	V
at $I_F = 15\text{ mA}$ BAT43W		-	0.45	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

RATING AND CHARACTERISTIC CURVES (BAT42W BAT43W)

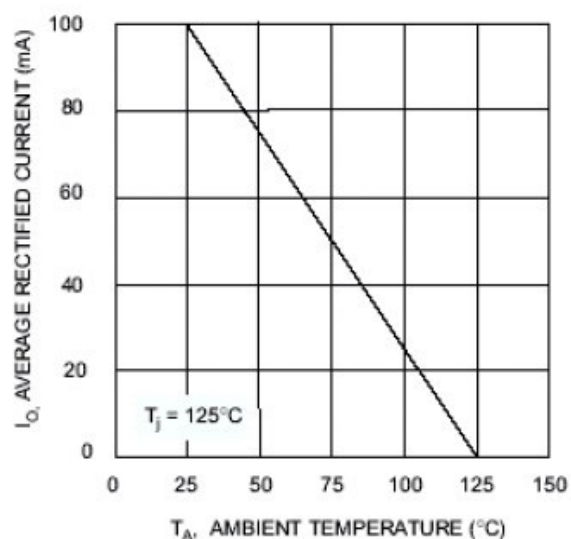


Fig. 1 Forward Current Derating Curve

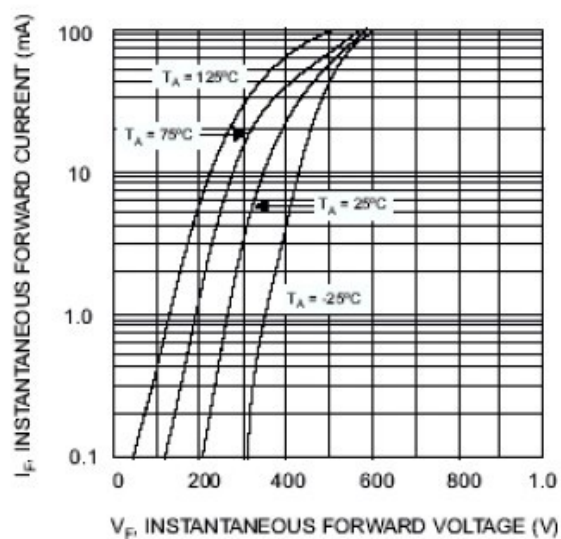


Fig. 2 Typical Forward Characteristics

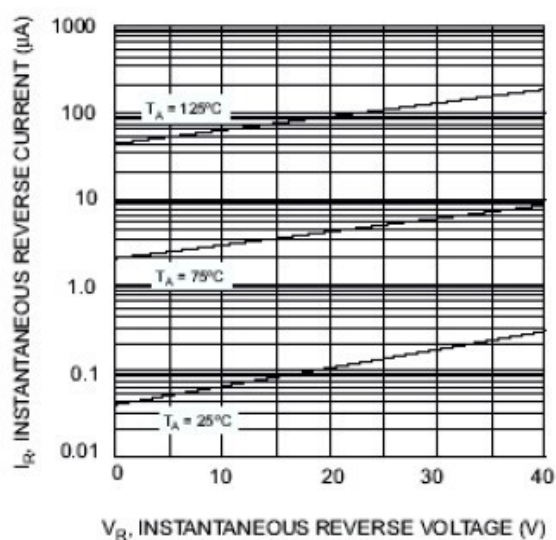


Fig. 3 Typical Reverse Characteristics

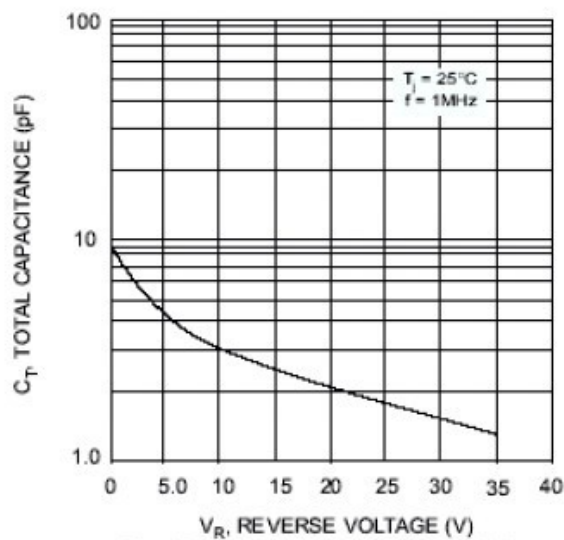


Fig. 4 Total Capacitance vs. Reverse Voltage