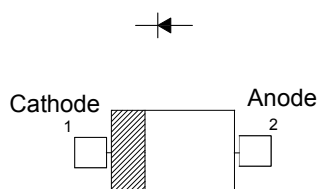


BAT42WS/BAT43WS

SURFACE MOUNT SCHOTTKY BARRIER DIODE

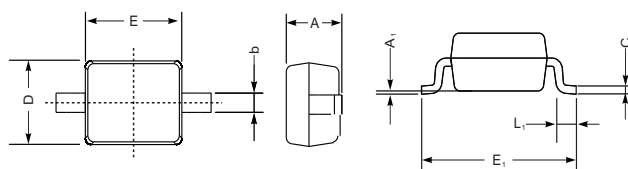
Features

- Low Forward Voltage Drop
- Fast Switching



SOD-323

SOD323



UNIT		A	C	D	E	E ₁	b	L ₁	A ₁
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—
mil	max	43	5.9	55	70	108	16	16	8
	min	32	3.1	47	63	100	9.8	7.9	—

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}	0.8	A
Power Dissipation	P _{tot}	200	mW
Thermal Resistance Junction to Ambient	R _{θJA}	500	°C/W
Operating and Storage Temperature Range	T _J , T _{stg}	- 55 to + 125	°C

BAT42WS/BAT43WS

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 $I_F = 10\text{ mA}$ BAT42WS		-	0.4	V
at $I_F = 50\text{ mA}$ BAT42WS		-	0.65	V
at $I_F = 2\text{ mA}$ BAT43WS		0.26	0.33	V
at $I_F = 15\text{ mA}$ BAT43WS		-	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 (BAT42WS/BAT43WS)

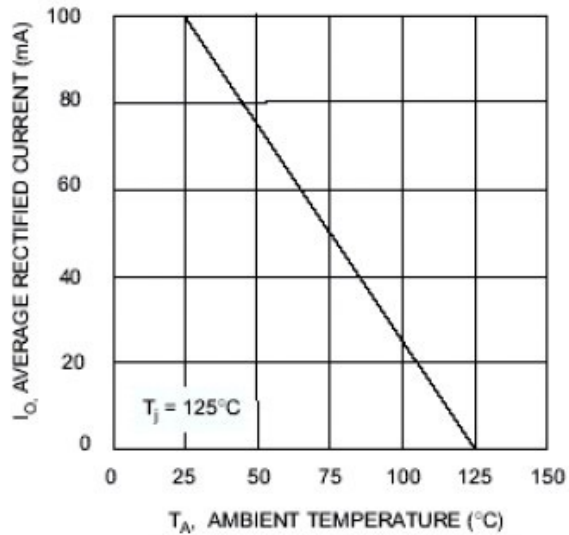


Fig. 1 Forward Current Derating Curve

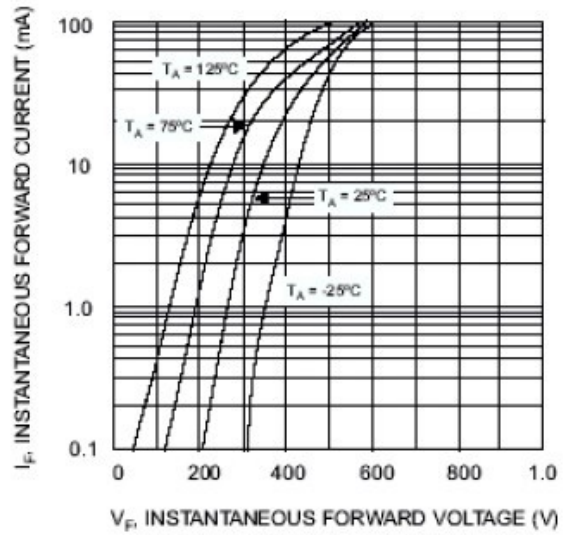


Fig. 2 Typical Forward Characteristics

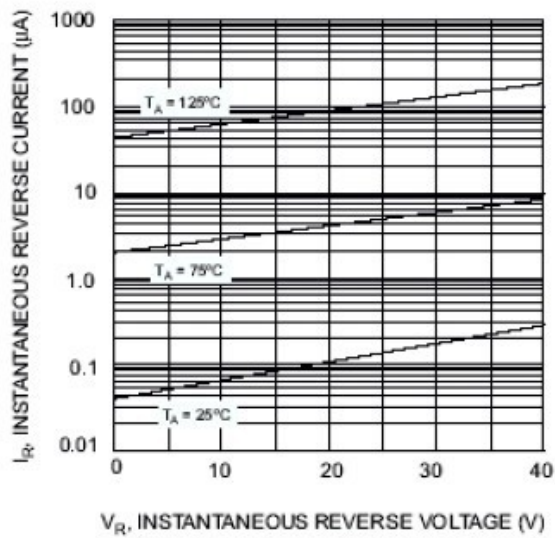


Fig. 3 Typical Reverse Characteristics

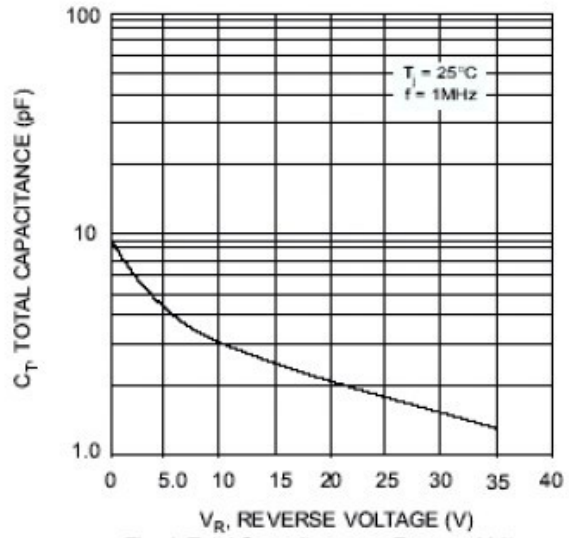


Fig. 4 Total Capacitance vs. Reverse Voltage