

# BAT54W / AW / CW / SW

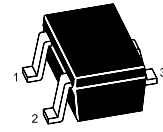
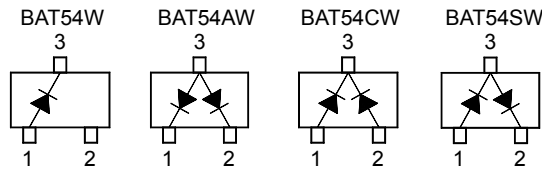
## SURFACE MOUNT SCHOTTKY BARRIER DIODE

### Features

- Low forward voltage

### Applications

- Ultra high-speed switching
- Voltage clamping
- Protection circuits



SOT-323 Plastic Package

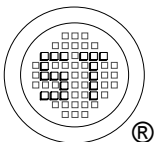
BAT54W Marking Code: L4  
 BAT54AW Marking Code: L42  
 BAT54CW Marking Code: L43  
 BAT54SW Marking Code: L44

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	30	V
Reverse Voltage	$V_R$	30	V
Forward Current	$I_F$	200	mA
Repetitive Peak Forward Current	$I_{FRM}$	300	mA
Peak Forward Surge Current ( $t_p = 10\text{ ms}$ )	$I_{FSM}$	600	mA
Total Power Dissipation	$P_{tot}$	200	mW
Thermal Resistance from Junction Ambient	$R_{thJA}$	625	K/W
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Storage Temperature Range	$T_s$	- 65 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 0.1\text{ mA}$ at $I_F = 1\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 30\text{ mA}$ at $I_F = 100\text{ mA}$	$V_F$	- - - - -	240 320 400 500 1000	mV
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	30	-	V
Reverse Current at $V_R = 25\text{ V}$	$I_R$	-	2	$\mu\text{A}$
Total Capacitance at $V_R = 1\text{ V}$ , $f = 1\text{ MHz}$	$C_T$	-	10	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$ through $I_R = 10\text{ mA}$ to $I_R = 1\text{ mA}$ , $R_L = 100\text{ }\Omega$	$t_{rr}$	-	5	ns



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7116



ISO 9001:2000  
Certificate No. 0506098

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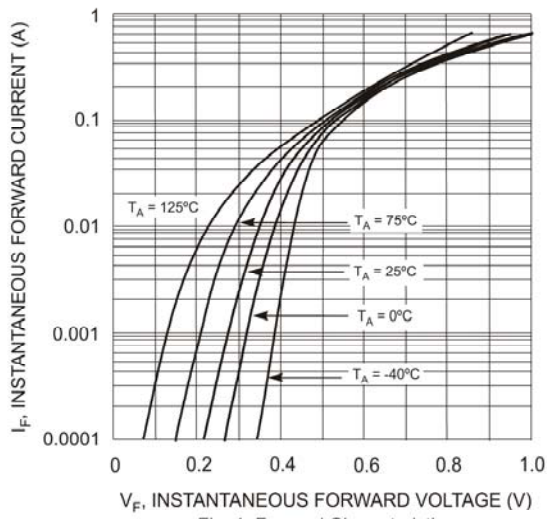


Fig. 1 Forward Characteristics

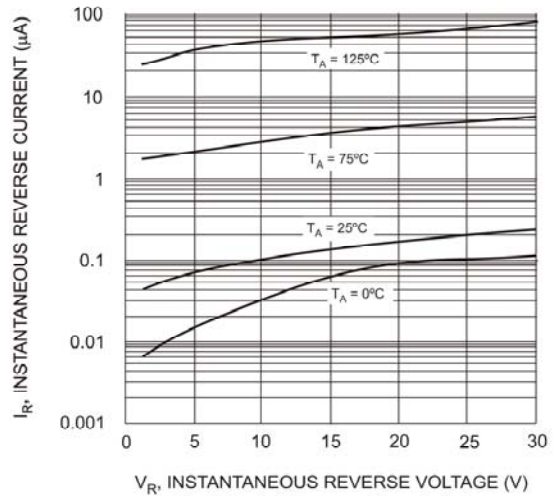


Fig. 2 Typical Reverse Characteristics

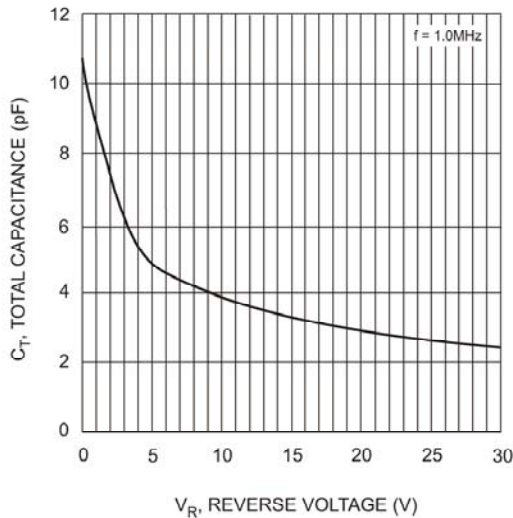


Fig. 3 Typical Capacitance vs. Reverse Voltage

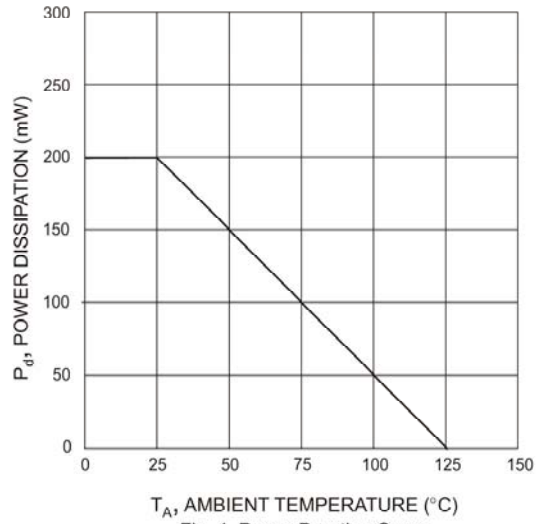
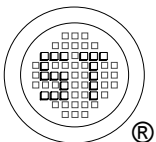


Fig. 4 Power Derating Curve



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