

# BAT54 /A/C/S

**PRV : 30 Volts**  
**Io : 200 mA**

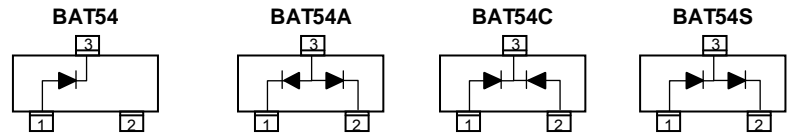
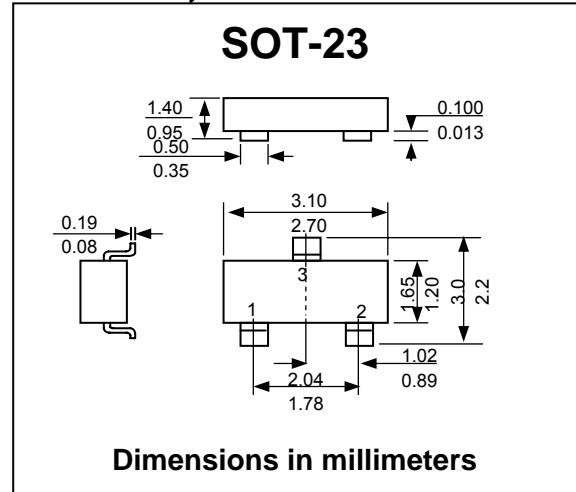
## FEATURES :

- \* These diodes feature very low turn-on voltage
- \* Fast switching
- \* These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- \* **Pb / RoHS Free**

## MECHANICAL DATA :

- \* Case : SOT-23 plastic Case
- \* BAT54 Marking Code : L4
- \* BAT54A Marking Code : L42
- \* BAT54C Marking Code : L43
- \* BAT54S Marking Code : L44

## SMALL SIGNAL SCHOTTKY DIODE, SINGLE & DUAL



## ABSOLUTE MAXIMUM RATINGS<sup>(1)</sup> (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	30	V
Maximum Rectified Average Forward Current	$I_{F(AV)}$	200	mA
Maximum Peak Forward Surge Current at $t_p < 1$ s	$I_{FSM}$	600	mA
Power Dissipation	$P_{tot}$	290	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	430	K/W
Junction Temperature Range	$T_J$	-55 to +150	°C
Storage Temperature Range	$T_{STG}$	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

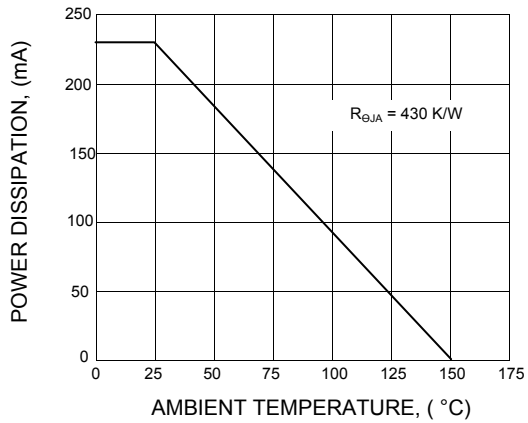
Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$I_R = 10\mu A$ pulses	$V_{(BR)}$	30	-	-	V
Leakage Current (Note 2)	$V_R = 25$ V	$I_R$	-	-	2	$\mu A$
Forward Voltage (Note 2)	$I_F = 0.1$ mA	$V_F$	-	-	240	mV
	$I_F = 1$ mA	$V_F$	-	-	320	mV
	$I_F = 10$ mA	$V_F$	-	-	400	mV
	$I_F = 30$ mA	$V_F$	-	-	500	mV
	$I_F = 100$ mA	$V_F$	-	-	1000	mV
Diode Capacitance	$V_R = 1$ V, $f = 1$ MHz	$C_{tot}$	-	-	10	pF
Reverse Recovery Time	$I_F = 10$ mA through $I_R = 10$ mA, to $I_{rr} = 1$ A, $R_L = 100 \Omega$	$T_{rr}$	-	-	5	ns

### Note :

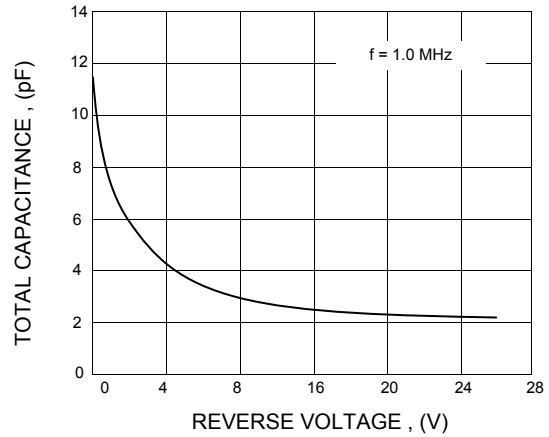
(1) These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

**RATINGS AND CHARACTERISTIC CURVES ( BAT54/54A/54C/54S )**

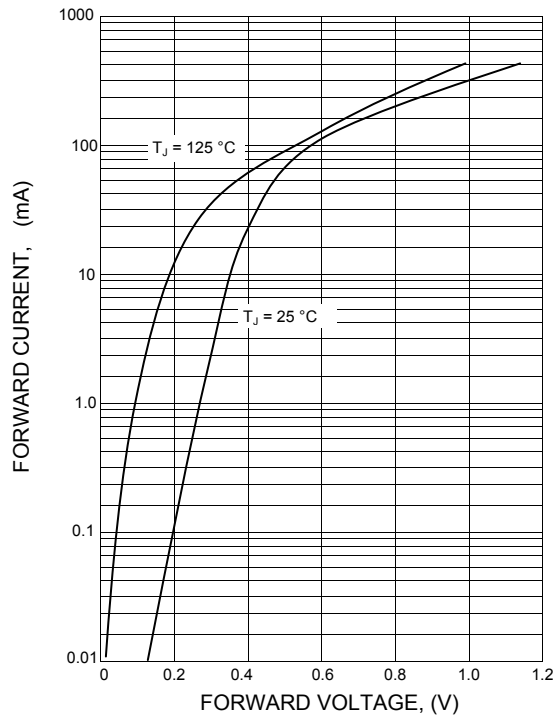
**FIG.1 - DERATING CURVE**



**FIG.2 - TYPICAL CAPACITANCE VS. REVERSE VOLTAGE**



**FIG.3 - TYPICAL FORWARD VOLTAGE FORWARD CURRENT AT VARIOUS TEMPERATURE**



**FIG.4 - TYPICAL VARIATION OF REVERSE CURRENT AT VARIOUS TEMPERATURES**

