



# BAT54 / A / C / S

## Surface Mount Schottky Barrier Diode



Voltage Range  
30 Volts  
200m Watts Power Dissipation

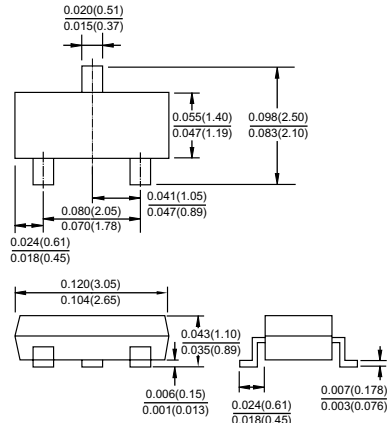
### SOT-23

### Features

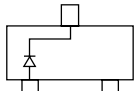
- ✧ Low turn-on voltage
- ✧ Fast switching
- ✧ PN junction guard ring for transient and ESD protection

### Mechanical Data

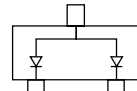
- ✧ Case: SOT-23, Molded plastic
- ✧ Terminals: Solderable per MII-STD-202, Method 208
- ✧ Marking & Polarity: See diagram
- ✧ Weight: 0.008 gram (approx.)



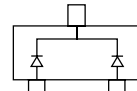
Dimensions in inches and (millimeters)



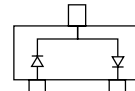
BAT54 Marking: L4



BAT54A Marking: L42



BAT54C Marking: L43



BAT54S Marking: L44

### Maximum Ratings $T_A=25^\circ\text{C}$ unless otherwise specified

Type Number	Symbol	Value	Units
Peak Repetitive Reverse Voltage	VRRM	30	V
Working Peak Reverse Voltage	VRWM		
DC Blocking Voltage	VR		
Forward Continuous Current	IF	200	mA
Repetitive Peak Forward Current	IFM	300	mA
Forward Surge Current @ t=1.0s	IFSM	600	mA
Power Dissipation (Note 1)	Pd	200	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	500	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to + 125	$^\circ\text{C}$

### Electrical Characteristics

Type Number	Symbol	Min	Typ	Max	Units
Reverse Breakdown Voltage (Note 1)	V(BR)R	30	-	-	V
Reverse Leakage Current (Note 1) $V_R=25\text{V}$	IR	-	--	2.0	$\mu\text{A}$
Forward Voltage (Note 1)	VF	-	-	240	mV
IF=0.1mA				320	
IF=1.0mA				400	
IF= 10mA				500	
IF= 30mA				1000	
IF=100mA					
Junction Capacitance $V_R=0, f=1.0\text{MHz}$	Cj	-	-	10	pF
Reverse Recovery Time (Note 2)	trr	-	-	5.0	nS

Notes: 1. Short Duration Pulse Test used to Minimize Self-Heating Effect.

2. Reverse Recovery Test Conditions:  $I_F=10\text{mA}$  through  $I_R=10\text{mA}$  to  $I_R=1.0\text{mA}$ ,  $R_L=100\Omega$ .

## RATINGS AND CHARACTERISTIC CURVES (BAT54 / A / C / S)

FIG.1- POWER DERATING CURVE

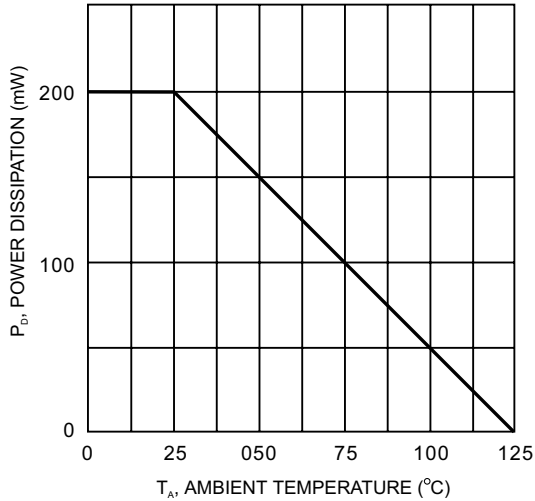


FIG.2- TYPICAL FORWARD CHARACTERISTICS

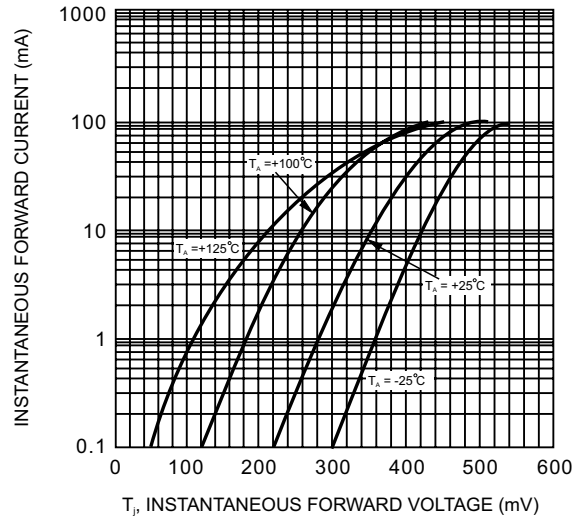


FIG.3- TYPICAL REVERSE CHARACTERISTICS

