

**SURFACE MOUNT  
SCHOTTKY BARRIER DIODE**

**REVERSE VOLTAGE – 30 Volts  
FORWARD CURRENT – 0.2 Ampere**

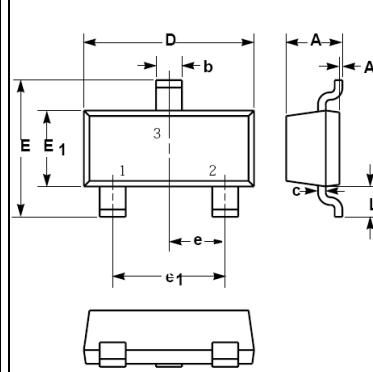
**FEATURES**

- Extremely Fast Switching Speed
- Low Forward Voltage
- Very Small Conduction Losses

**MECHANICAL DATA**

- Case: SOT-523 Plastic
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture Sensitivity: Level 1 per J-STD-020D
- Lead Free in RoHS 2002/95/EC Compliant

**SOT-523**



SOT-523		
Dim.	Min.	Max.
A	0.70	0.90
A1	0.00	0.10
b	0.25	0.325
c	0.10	0.20
D	1.50	1.70
E	1.45	1.75
E1	0.75	0.85
e	0.50 Typ.	
e1	0.90	1.10
L	0.55 Ref.	
Dimensions in millimeter		

**Maximum Ratings & Thermal Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified**

Characteristic	Symbol	BAT54T	BAT54AT	BAT54CT	BAT54ST	Units
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	30				V
Working Peak Reverse Voltage	V <sub>RWM</sub>	30				V
DC Blocking Voltage	V <sub>R</sub>	30				V
Average Rectified Output Current	I <sub>O</sub>	200				mA
Forward Surge Current @t<1.0s	I <sub>FSM</sub>	600				mA
Power Dissipation	P <sub>D</sub>	150				mW
Operating Temperature Range	T <sub>J</sub>	125				°C
Storage Temperature Range	T <sub>STG</sub>	-65~+150				°C

**Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified**

Characteristic	Test Condition	Symbol	BAT54T	BAT54AT	BAT54CT	BAT54ST	Unit
Reverse Breakdown Voltage	I <sub>R</sub> = 100uA	V <sub>BR</sub>	30				V
Maximum Forward Voltage	I <sub>F</sub> = 0.1mA	V <sub>F</sub>	240				mV
	I <sub>F</sub> = 1mA		320				
	I <sub>F</sub> = 10mA		400				
	I <sub>F</sub> = 30mA		500				
	I <sub>F</sub> = 100mA		1000				
Maximum DC Reverse Current at Rated DC Blocking Voltage	V <sub>R</sub> = 25V	I <sub>R</sub>	2				uA
Typical Diode Capacitance	V <sub>R</sub> = 1.0V, f=1MHz	C <sub>D</sub>	10				pF
Reverse Recovery time	I <sub>rr</sub> =1mA, I <sub>R</sub> =I <sub>F</sub> =10mA, R <sub>L</sub> =100Ω	trr	5				nS

# RATING AND CHARACTERISTIC CURVES

## BAT54T, BAT54AT / CT / ST



FIG.1- TYPICAL FORWARD CHARACTERISTICS

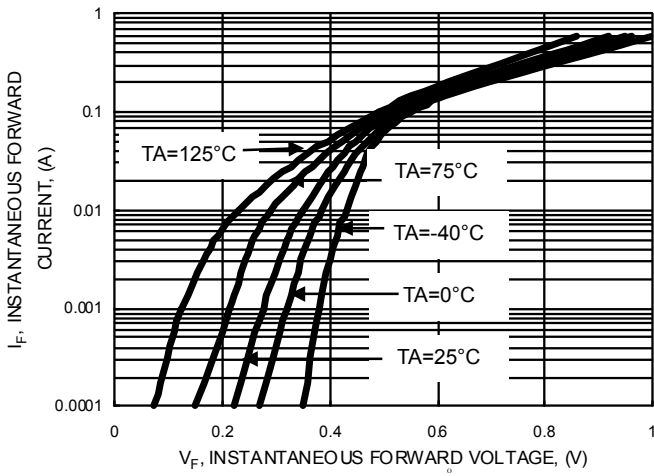


FIG.2- TYPICAL REVERSE CHARACTERISTICS

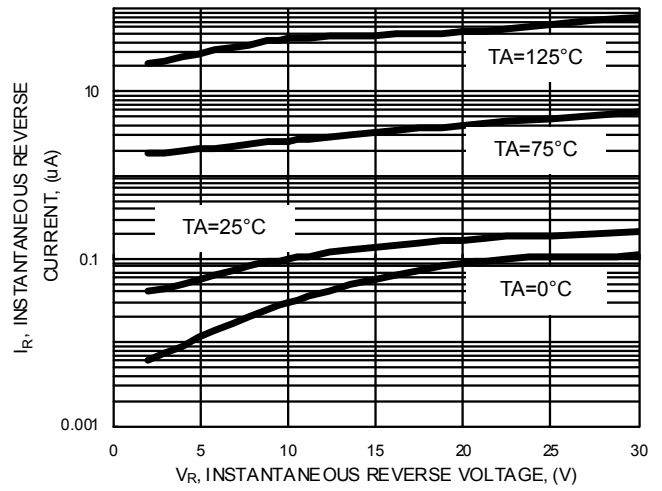


FIG.3- TYPICAL JUNCTION CAPACITANCE

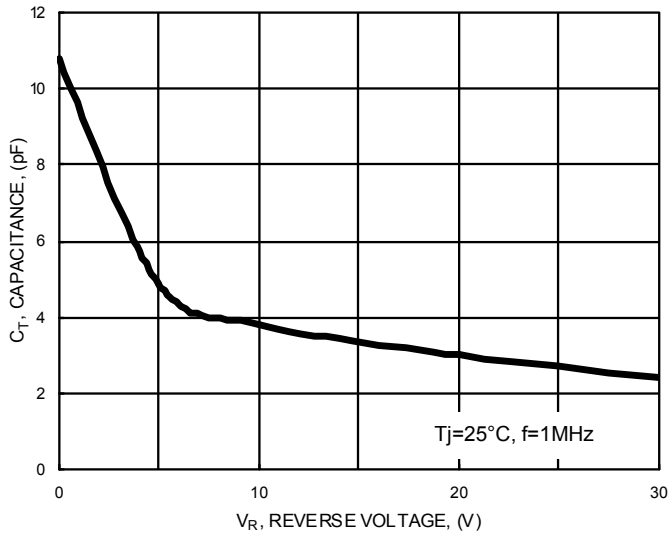
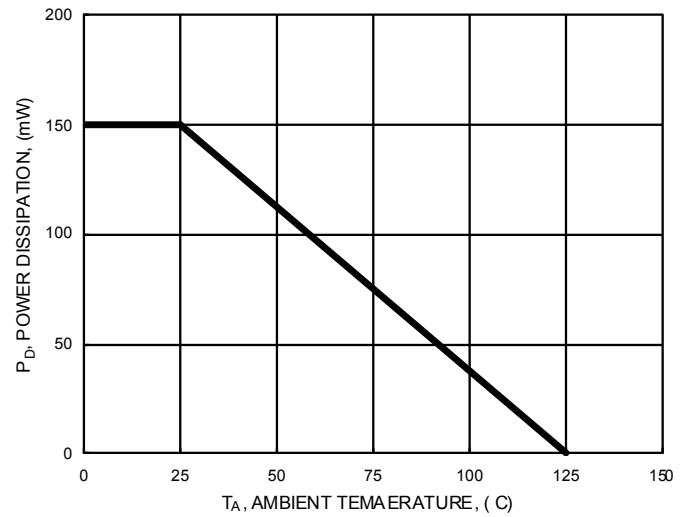


FIG.4- POWER DERATING CURVE



### Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
BAT54T	L1	
BAT54AT	L2	
BAT54CT	L3	
BAT54ST	L4	

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