

**SURFACE MOUNT  
SCHOTTKY BARRIER DIODE**

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

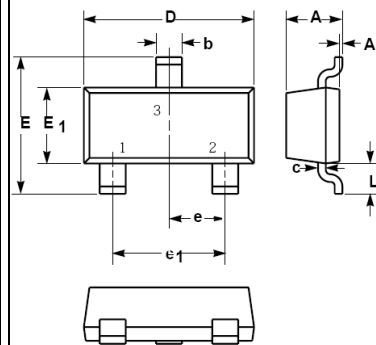
**FEATURES**

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

**MECHANICAL DATA**

- Case: SOT-323 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-323**



SOT-323		
Dim.	Min.	Max.
A	0.90	1.10
A1	0.00	0.10
b	0.20	0.40
c	0.08	0.15
D	2.00	2.20
E	2.15	2.45
E1	1.15	1.35
e	0.65 Typ.	
e1	1.20	1.40
L	0.525 Ref.	
Dimensions in millimeter		

**Maximum Ratings & Thermal Characteristics @  $T_A = 25^\circ\text{C}$  unless otherwise specified**

Characteristic	Symbol	BAT54W	BAT54AW	BAT54CW	BAT54SW	Units
Repetitive Peak Reverse Voltage	$V_{RRM}$	30				V
Working Peak Reverse Voltage	$V_{RWM}$					
DC Blocking Voltage	$V_R$					
Average Rectified Output Current	$I_O$	200				mA
Forward Surge Current @ $t < 1.0\text{s}$	$I_{FSM}$	600				mA
Power Dissipation	$P_D$	200				mW
Operating Temperature Range	$T_J$	125				$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55~+125				$^\circ\text{C}$

**Electrical Characteristics @  $T_A = 25^\circ\text{C}$  unless otherwise specified**

Characteristic	Test Condition	Symbol	BAT54W	BAT54AW	BAT54CW	BAT54SW	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

## BAT54W, BAT54AW / CW / SW



FIG.1- TYPICAL FORWOD CHARACTERISTICS

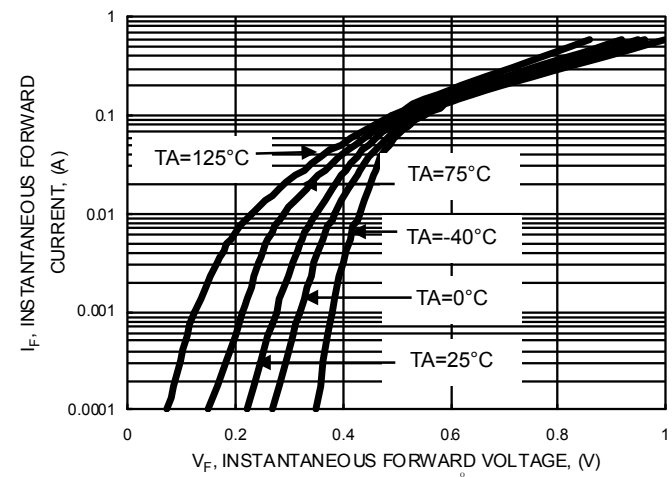


FIG.2- TYPICAL REVERSE CHARACTERISTICS

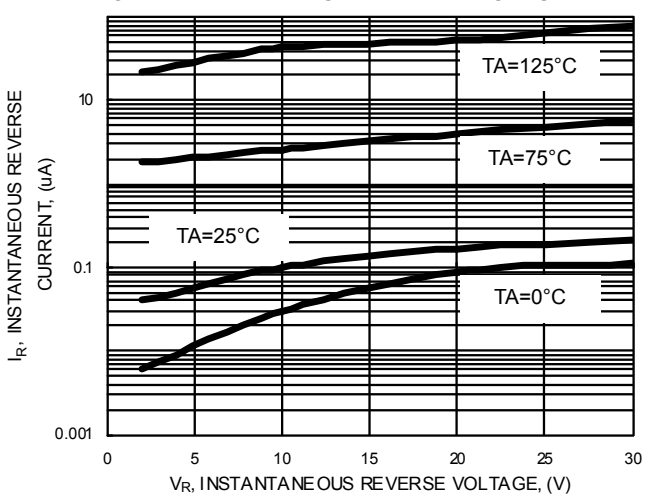


FIG.3- TYPICAL JUNCTION CAPACITANCE

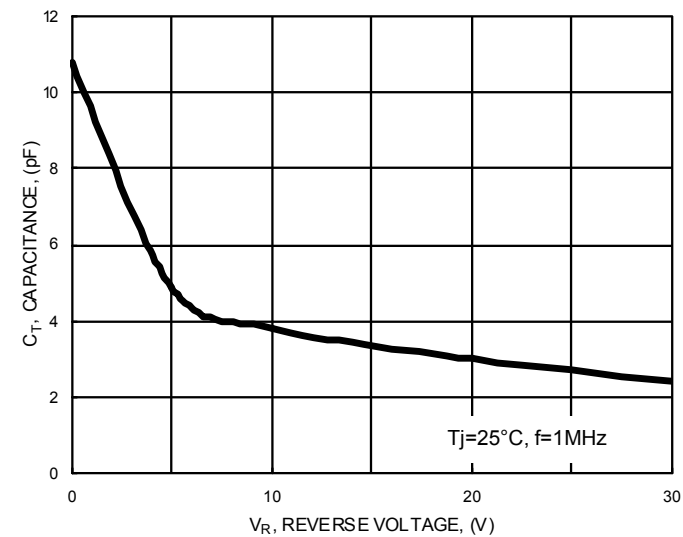
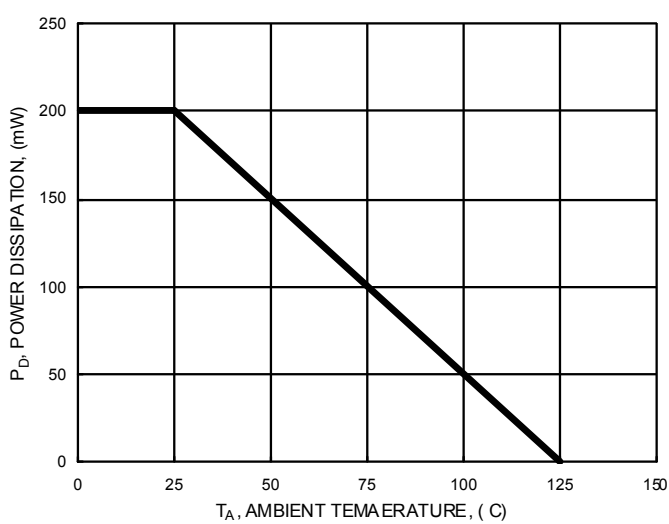


FIG.4- POWER DERATING CURVE



### Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
BAT54W	KL5	
BAT54AW	KL6	
BAT54CW	KL7	
BAT54SW	KL8	

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