

**SURFACE MOUNT  
SCHOTTKY BARRIER DIODE**

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

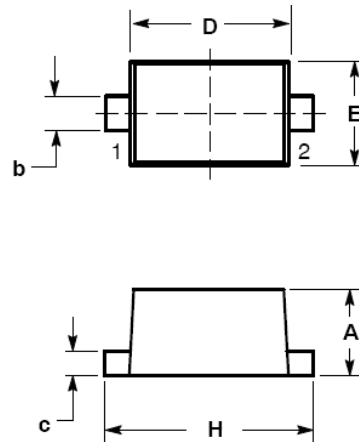
**FEATURES**

- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection

**MECHANICAL DATA**

- Case: SOD-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

**SOD-523**



SOD-523		
Dim.	Min.	Max.
A	0.50	0.77
b	0.25	0.35
c	0.07	0.20
D	1.10	1.30
E	0.70	0.90
H	1.50	1.70
Dimensions in millimeter		

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

Characteristic	Symbol	BAT54X	Units
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	30	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	21	V
Average Rectified Output Current	I <sub>O</sub>	100	mA
Forward continuous Current	I <sub>F</sub>	200	mA
Repetitive peak Forward Current	I <sub>FRM</sub>	300	mA
Forward Surge Current @t<1s	I <sub>FSM</sub>	600	mA
Power Dissipation	P <sub>D</sub>	200	mW
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	625	°C/W
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	BAT54X	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

REV. 2, Jan-2013, KSHR27

# RATING AND CHARACTERISTIC CURVES BAT54X



FIG.1- TYPICAL FORWARD CHARACTERISTICS

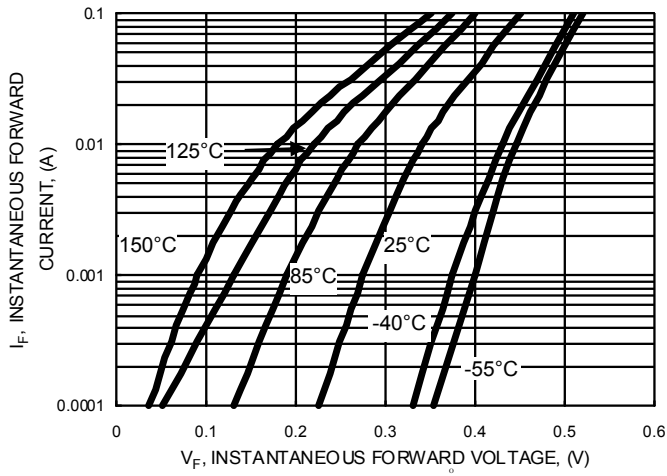


FIG.2- TYPICAL REVERSE CHARACTERISTICS

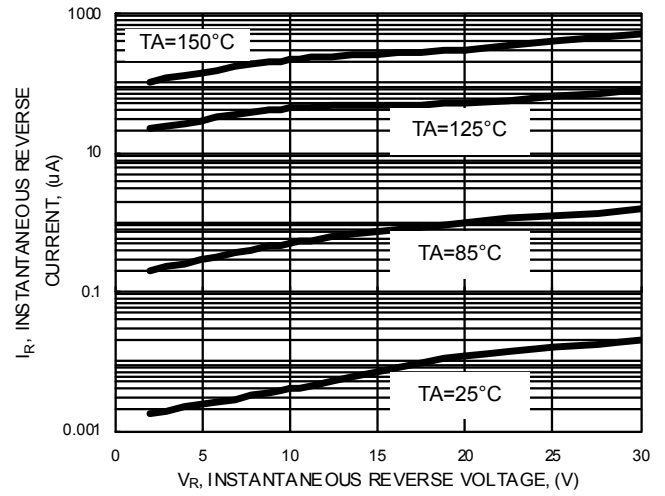
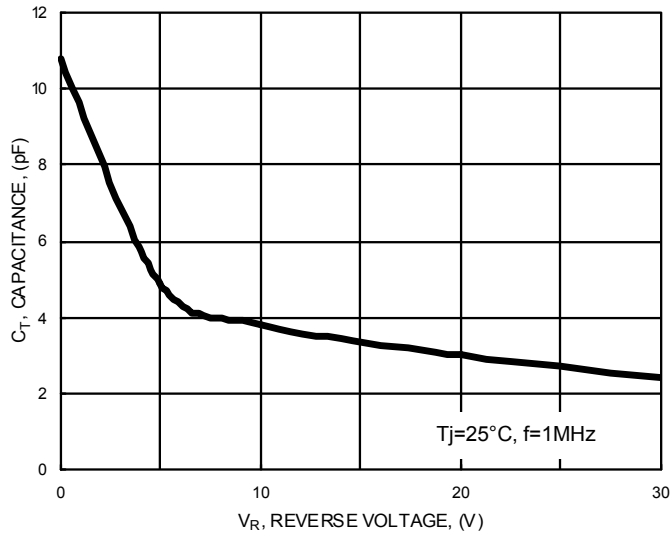


FIG.3- TYPICAL JUNCTION CAPACITANCE



## Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
BAT54X	JV	

## **Important Notice and Disclaimer**

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## New Marking Rule Notification

Range: In order to have well management in process control, the new marking rule is applied to small signal device including Switching Diode, Transistor and Schottky Diode.

Package: SOD-123 / SOD-323 / SOD-523

