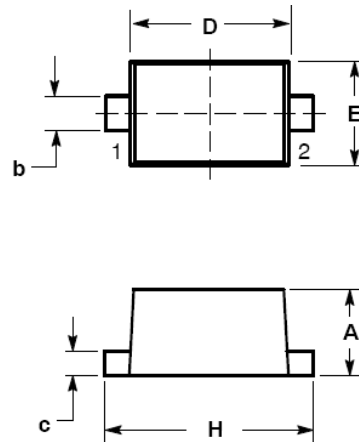


**SURFACE MOUNT
SCHOTTKY BARRIER DIODE**
**REVERSE VOLTAGE – 30 Volts
FORWARD CURRENT – 0.2 Ampere**
FEATURES

- 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 @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	BAT54X	Units
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Average Rectified Output Current	I_O	100	mA
Forward continuous Current	I_F	200	mA
Repetitive peak Forward Current	I_{FRM}	300	mA
Forward Surge Current @ $t < 1\text{s}$	I_{FSM}	600	mA
Power Dissipation	P_D	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating Temperature Range	T_J	125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

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

Characteristic	Test Condition	Symbol	BAT54X	Unit
Reverse Breakdown Voltage	$I_R = 100\mu\text{A}$	V_{BR}	30	V
Maximum Forward Voltage	$I_F = 0.1\text{mA}$	V_F	240	mV
	$I_F = 1\text{mA}$		320	
	$I_F = 10\text{mA}$		400	
	$I_F = 30\text{mA}$		500	
	$I_F = 100\text{mA}$		1000	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$V_R = 25\text{V}$	I_R	2	μA
Typical Diode Capacitance	$V_R = 1.0\text{V}, f = 1\text{MHz}$	C_D	10	pF
Reverse Recovery time	$I_{RR} = 1\text{mA}$, $I_R = I_F = 10\text{mA}$ $R_L = 100\Omega$	t_{rr}	5	nS

RATING AND CHARACTERISTIC CURVES

BAT54X



FIG.1- TYPICAL FORDWARD CHARACTERISTICS

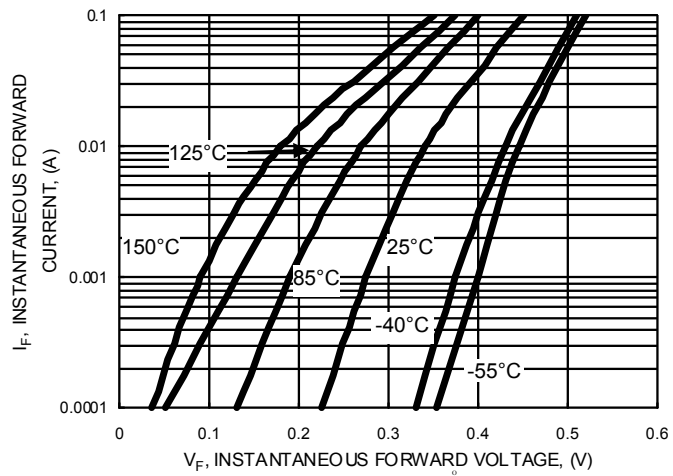


FIG.2- TYPICAL REVERSE CHARACTERISTICS

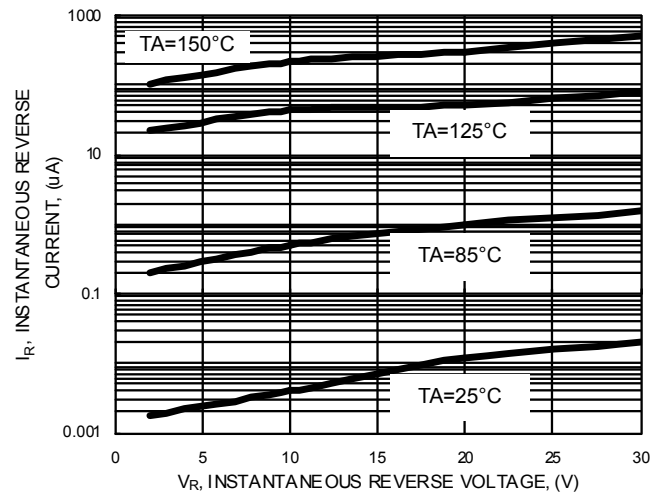
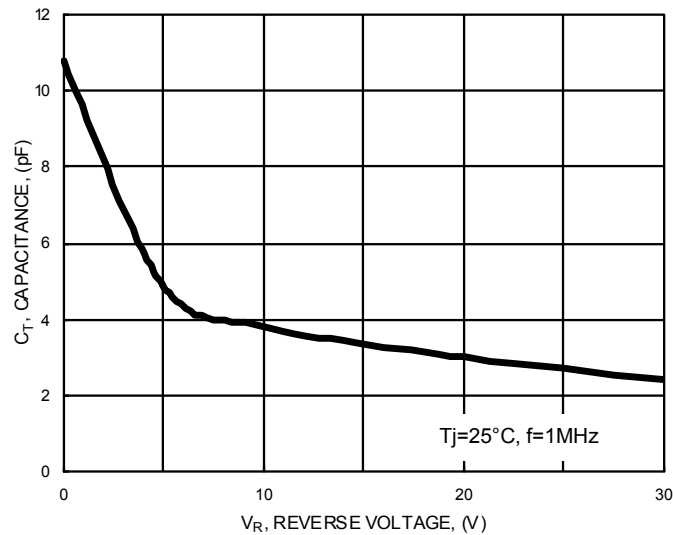


FIG.3- TYPICAL JUNCTION CAPACITANCE



Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
BAT54X	JV	<div> 1 ○ → ← ○ 2 </div>

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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

