LITE-ON SEMICONDUCTORS

BAT54X

SURFACE MOUNT
SCHOTTKY BARRIER DIODE

REVERSE VOLTAGE – 30 Volts
FORWARD CURRENT – 0.2 Ampere

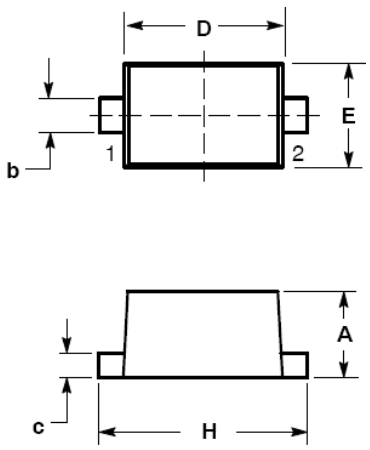
FEATURES

- 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℃ unless otherwise specified

Characteristic	Symbol	BAT54X	Units
Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
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<1s	I_{FSM}	600	mA
Power Dissipation	P_D	200	mW
Thermal Resistance Junction to Ambient	$R_{\Theta JA}$	625	℃/W
Operating Temperature Range	T_J	125	℃
Storage Temperature Range	T_{STG}	-65~+150	℃

Electrical Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic	Test Condition	Symbol	BAT54X	Unit
Reverse Breakdown Voltage	I_R = 100uA	V_{BR}	30	V
Maximum Forward Voltage	I_F = 0.1mA I_F = 1mA I_F = 10mA I_F = 30mA I_F = 100mA	V_F	240 320 400 500 1000	mV
Maximum DC Reverse Current at Rated DC Blocking Voltage	V_R = 25V	I_R	2	uA
Typical Diode Capacitance	V_R =1.0V,f=1MHz	C_D	10	pF
Reverse Recovery time	Irr=1mA, IR=IF=10mA RL=100Ω	trr	5	nS

RATING AND CHARACTERISTIC CURVES
BAT54X

FIG.1- TYPICAL FORWORD CHARACTERISTICS

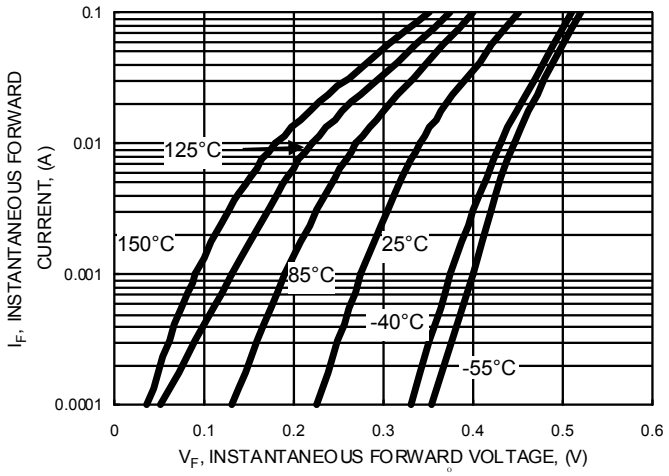


FIG.2- TYPICAL REVERSE CHARACTERISTICS

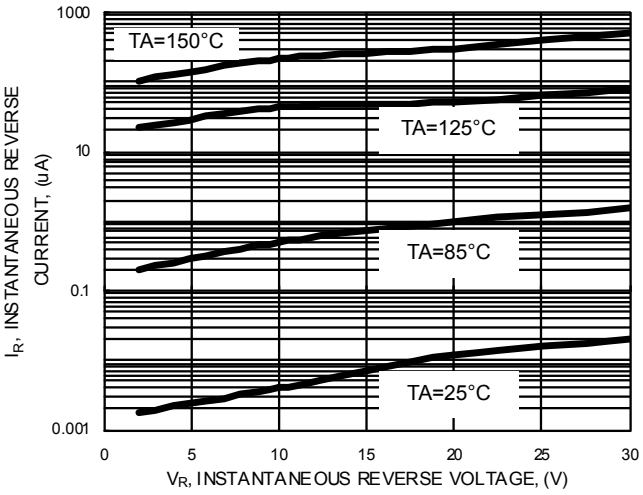
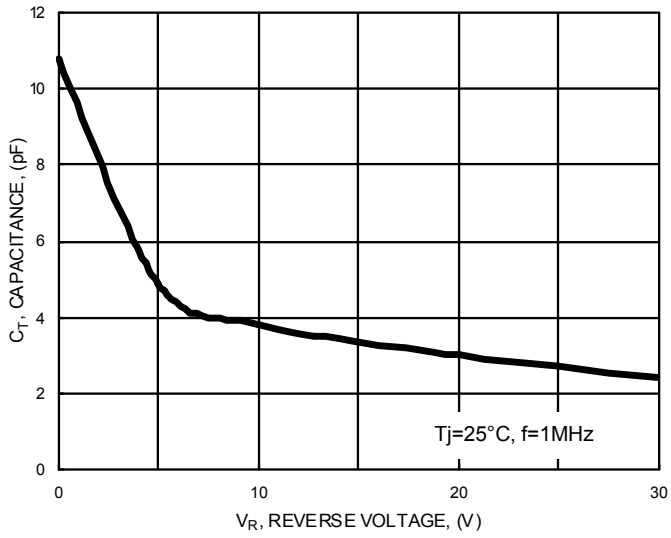


FIG.3- TYPICAL JUNCTION CAPACITANCE



Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
BAT54X	JV	1 ○—▶|—○ 2

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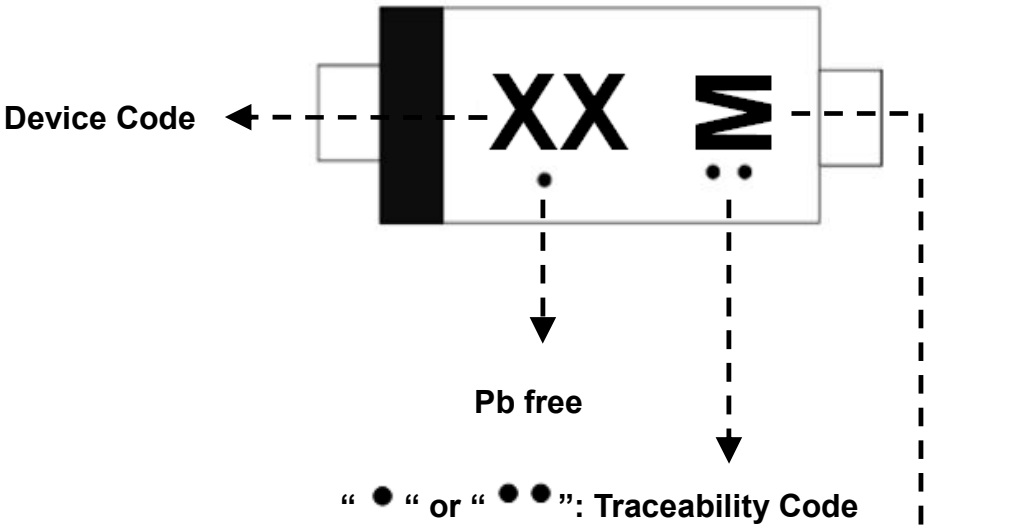
New Marking Rule Notification

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



Odd Year	Even Year
1	E
2	F
3	H
4	J
5	K
6	L
7	N
8	P
9	U
T	X
V	Y
C	Z