LITE-ON SEMICONDUCTOR

BAT54WS

SURFACE MOUNT
SCHOTTKY BARRIER DIODE

REVERSE VOLTAGE – 30 Volts
FORWARD CURRENT – 0.2 Amperes

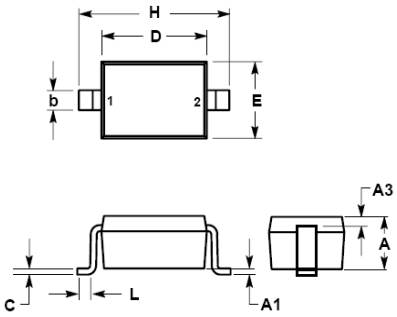
FEATURES

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

MECHANICAL DATA

- Case: SOD-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

SOD-323



SOD-323		
Dim.	Min.	Max.
A	0.80	1.00
A1	0.00	0.10
A3	0.15 REF	
B	0.25	0.40
C	0.089	0.177
D	1.60	1.80
E	1.15	1.35
L	0.08	---
H	2.30	2.70
Dimensions in millimeter		

Maximum Ratings & Thermal Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	SYMBOL	BAT54WS	UNIT
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_{thJA}	625	°C/W
Operating Temperature Range	T_J	-55~+125	°C
Storage Temperature Range	T_{STG}	-65~+150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

Characteristic	TEST CONDITION	SYMBOL	BAT54WS	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
BAT54WS

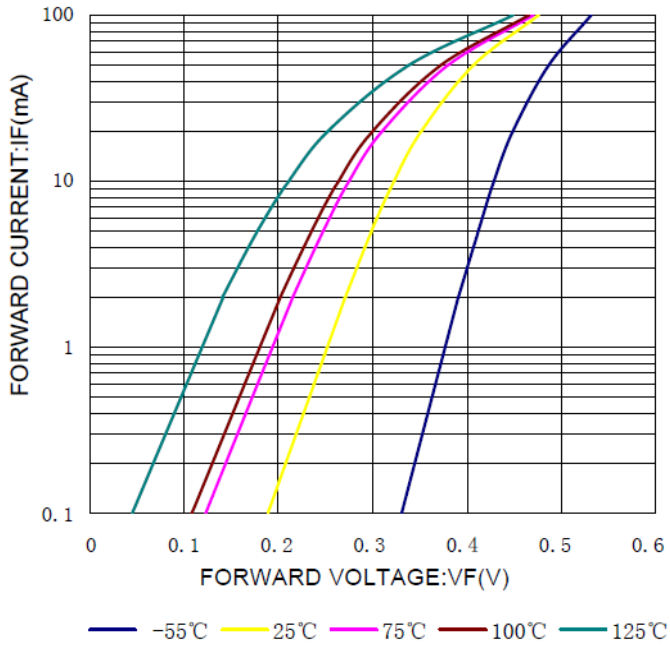


Fig.1 FORWARD CHARACTERISTICS

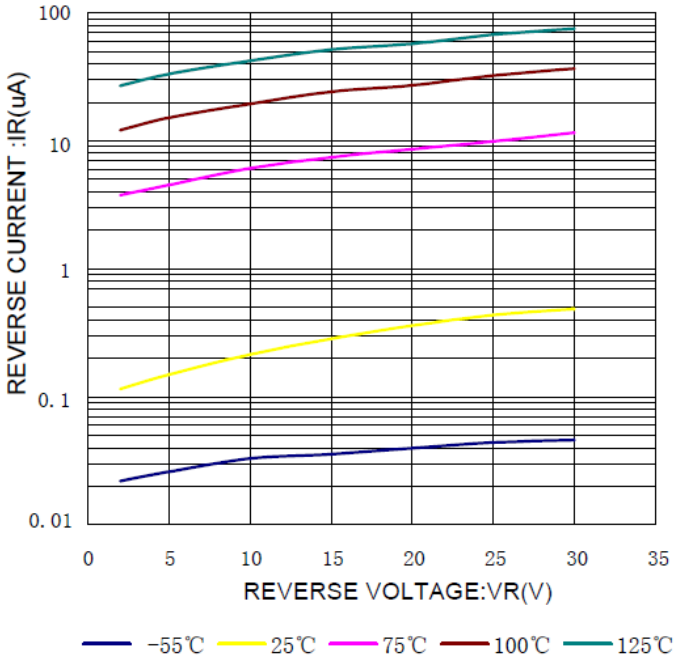


Fig.2 REVERSE CHARACTERISTICS

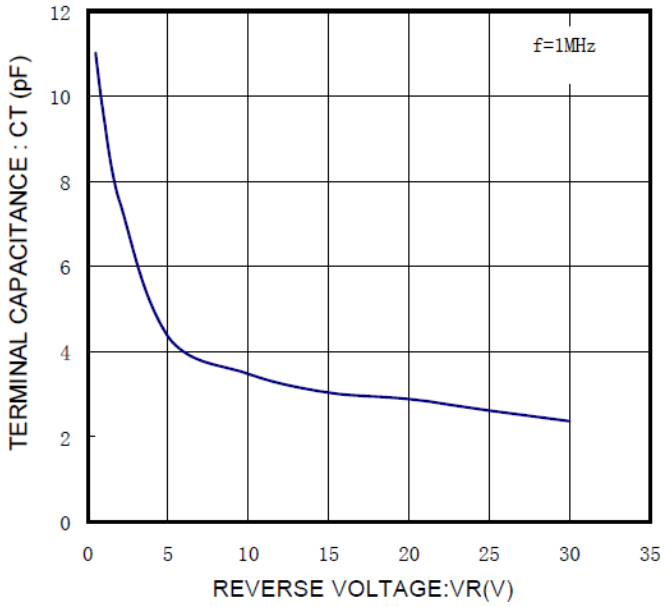


Fig.3 VR-CT CHARACTERISTICS

Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
BAT54WS	JV	1 ○—▶|—○ 2

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