LITE-ON SEMICONDUCTORS

BAT54, BAT54A / C / S

SURFACE MOUNT
SCHOTTKY BARRIER DIODE

REVERSE VOLTAGE – 30 Volts
FORWARD CURRENT – 0.2 Ampere

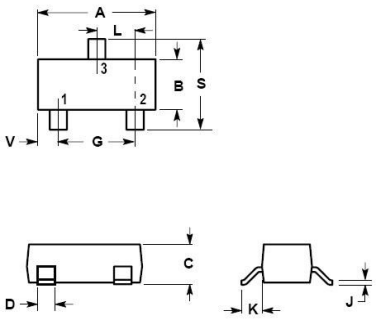
FEATURES

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

MECHANICAL DATA

- Case: SOT-23 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-23



SOT-23		
Dim.	Min.	Max.
A	2.80	3.04
B	1.20	1.40
C	0.89	1.11
D	0.37	0.50
G	1.78	2.04
J	0.085	0.177
K	0.35	0.69
L	0.89	1.02
S	2.10	2.64
V	0.45	0.60
Dimensions in millimeter		

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

Characteristic	Symbol	BAT54	BAT54A	BAT54C	BAT54S	Units
Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30				V
Forward Continuous Current	I_{FM}	200				mA
Forward Surge Current @t<1.0s	I_{FSM}	600				mA
Power Dissipation	P_D	200				mW
Operating Temperature Range	T_J	125				℃
Storage Temperature Range	T_{STG}	-55~+150				℃

Electrical Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic	Test Condition	Symbol	BAT54	BAT54A	BAT54C	BAT54S	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
BAT54, BAT54A / C / S

FIG.1- TYPICAL FORWORD CHARACTERISTICS

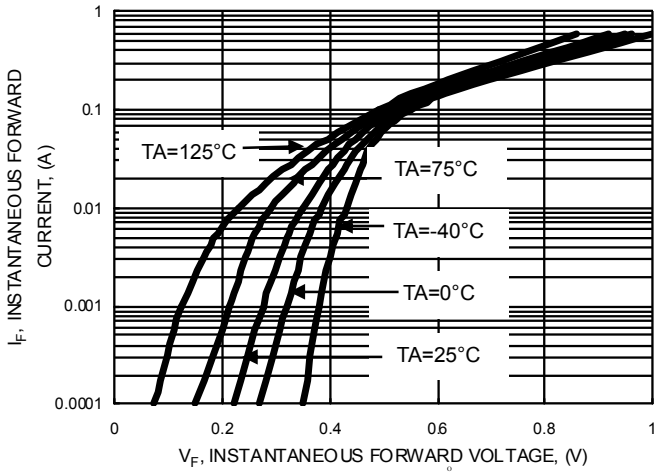


FIG.2- TYPICAL REVERSE CHARACTERISTICS

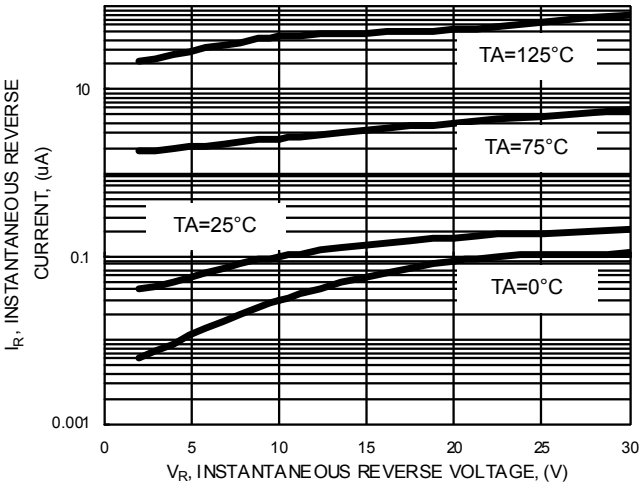


FIG.3- TYPICAL JUNCTION CAPACITANCE

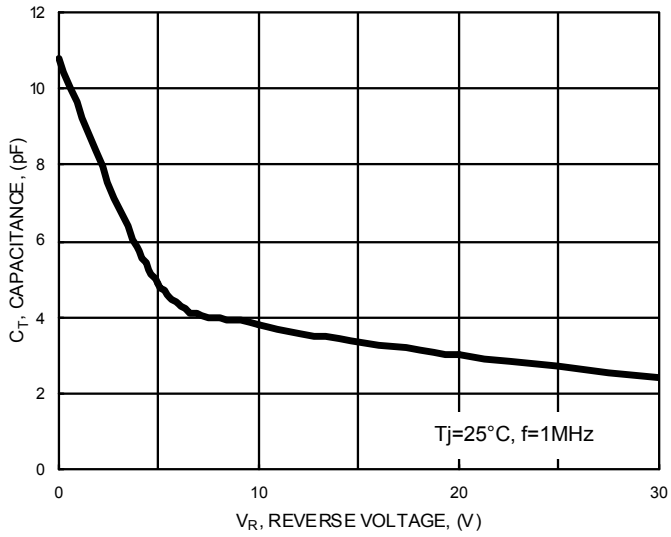
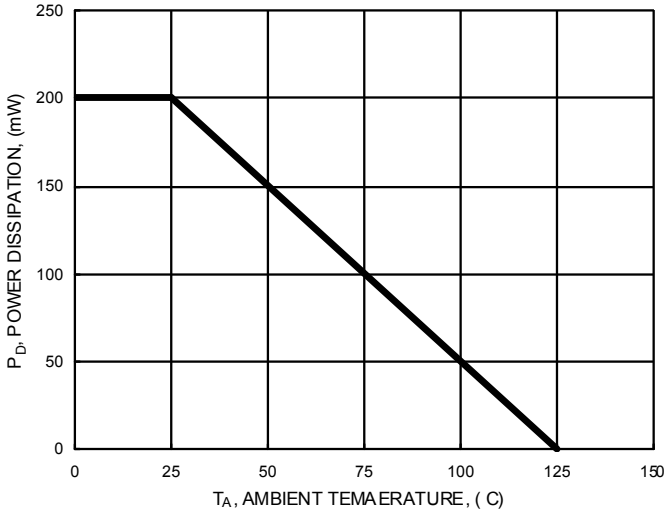
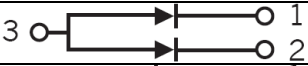
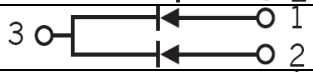
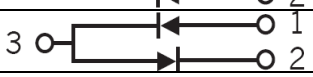


FIG.4- POWER DERATING CURVE



Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
BAT54	JV3	
BAT54A	B6	
BAT54C	5C	
BAT54S	LD3	

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