LITE-ON SEMICONDUCTORS

BAT54V

SURFACE MOUNT
SCHOTTKY BARRIER DIODE

REVERSE VOLTAGE – 30 Volts
FORWARD CURRENT – 0.2 Ampere

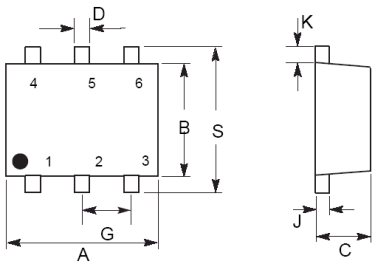
FEATURES

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

MECHANICAL DATA

- Case: SOT-563 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-563



SOT-563		
Dim.	Min.	Max.
A	1.50	1.70
B	1.10	1.30
C	0.525	0.60
D	0.17	0.27
G	0.45	0.55
J	0.09	0.16
K	0.10	0.30
S	1.50	1.70
Dimensions in millimeter		

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

Characteristic	Symbol	BAT54V	Units
Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
Average Rectified Output Current	I_O	200	mA
Forward Surge Current @t<1.0s	I_{FSM}	600	mA
Power Dissipation	P_D	150	mW
Thermal Resistance Junction to Ambient	$R_{\Theta JA}$	833	℃/W
Operating Temperature Range	T_J	125	℃
Storage Temperature Range	T_{STG}	-65~+125	℃

Electrical Characteristics @ T_A = 25℃ unless otherwise specified

Characteristic	Test Condition	Symbol	BAT54V	Unit
Reverse Breakdown Voltage	I_R = 100uA	V_{BR}	30	V
Maximum Forward Voltage	I_F = 1mA I_F = 10mA I_F = 30mA I_F = 100mA	V_F	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
BAT54V

FIG.1- TYPICAL FORWORD CHARACTERISTICS

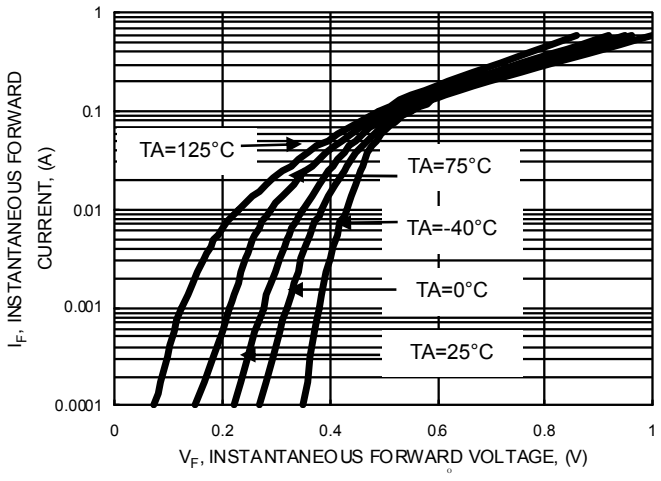


FIG.2- TYPICAL REVERSE CHARACTERISTICS

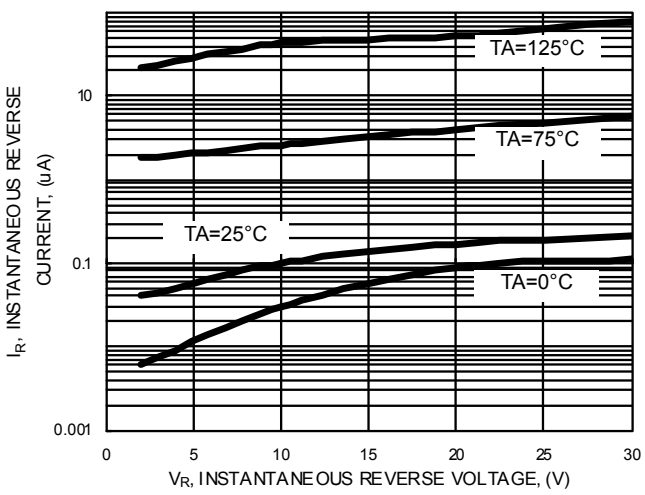


FIG.3- TYPICAL JUNCTION CAPACITANCE

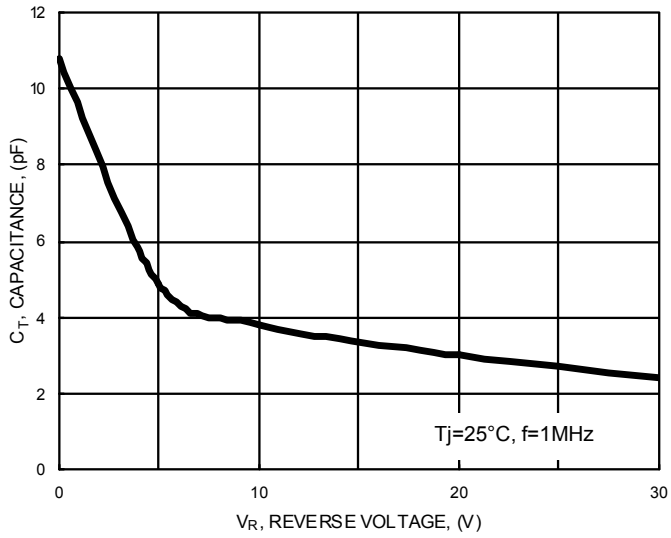
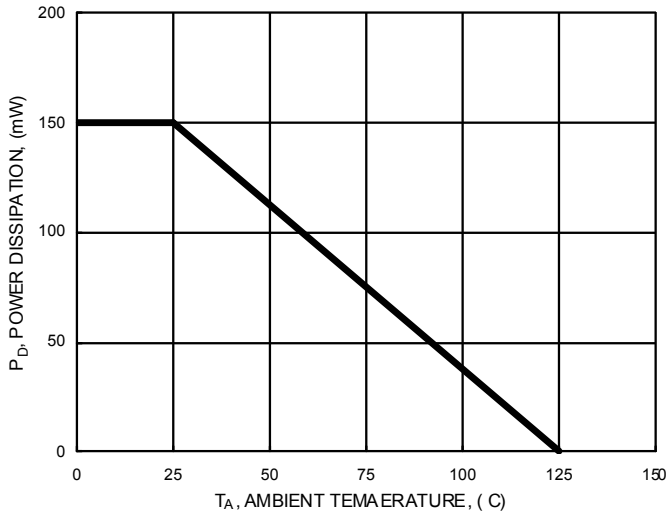
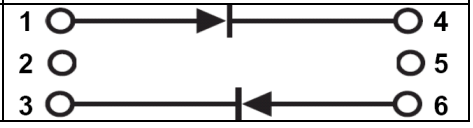


FIG.4- POWER DERATING CURVE



Device Marking :

Device P/N	Marking	Equivalent Circuit Diagram
BAT54V	KAV	

Important Notice and Disclaimer

LSC reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

LSC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does LSC assume any liability for application assistance or customer product design. LSC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of LSC.

LSC products are not authorized for use as critical components in life support devices or systems without express written approval of LSC.