

BAT54 / BAT54A / BAT54C / BAT54S

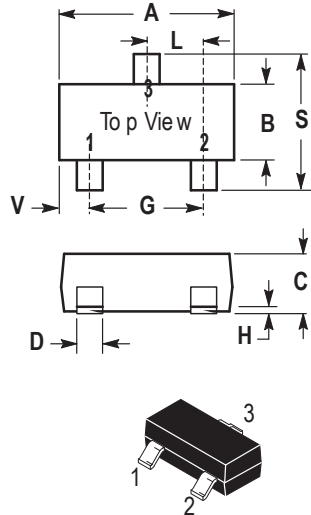
Surface Mount Schottky
Barrier Diode

Features

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

Mechanical Data

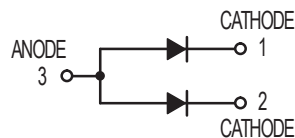
Case: Molded Plastic
Terminals: Solderable per MIL-STD-202,
Method 208
Polarity: See Diagrams Below
Weight: 0.008 grams (approx.)
Mounting Position: Any



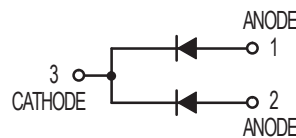
SOT-23		
Dim	Min	Max
A	2.800	3.040
B	1.200	1.400
C	0.890	1.110
D	0.370	0.500
G	1.780	2.040
H	0.013	0.100
J	0.085	0.177
K	0.450	0.600
L	0.890	1.020
S	2.100	2.500
V	0.450	0.600
All Dimension in mm		



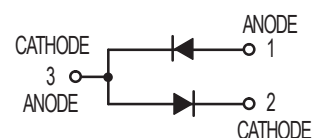
BAT54 Marking : LV3



BAT54A Marking : BG



BAT54C Marking : KV3



BAT54S Marking : LD3

MAXIMUM RATINGS ($T_J = 125^\circ\text{C}$ unless otherwise noted)

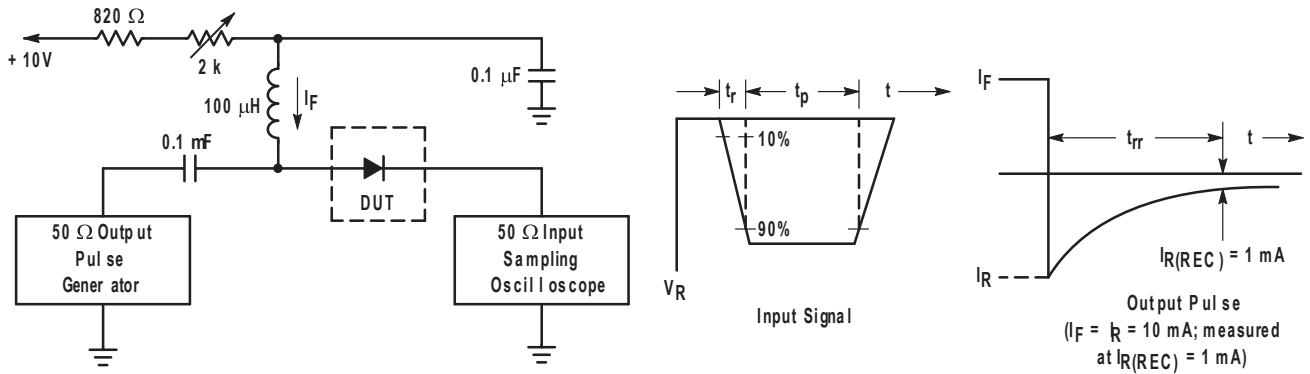
Rating	Symbol	Value	Unit
Reverse Voltage	V_R	30	Volts
Forward Power Dissipation @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_F	225 1.8	mW mW/°C
Forward Current (DC)	I_F	200 Max	mA
Junction Temperature	T_J	125 Max	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted) (EACH DIODE)

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ($I_R = 10\text{ mA}$)	$V_{(BR)R}$	30	—	—	Volts
Total Capacitance ($V_R = 1.0\text{ V}$, $f = 1.0\text{ MHz}$)	C_T	—	7.6	10	pF
Reverse Leakage ($V_R = 25\text{ V}$)	I_R	—	0.5	2.0	mAdc
Forward Voltage ($I_F = 0.1\text{ mAdc}$)	V_F	—	0.22	0.24	Vdc
Forward Voltage ($I_F = 30\text{ mAdc}$)	V_F	—	0.41	0.5	Vdc
Forward Voltage ($I_F = 100\text{ mAdc}$)	V_F	—	0.52	1.0	Vdc
Reverse Recovery Time ($I_F = I_R = 10\text{ mAdc}$, $I_{R(REC)} = 1.0\text{ mAdc}$) Figure 1	t_{rr}	—	—	5.0	ns
Forward Voltage ($I_F = 1.0\text{ mAdc}$)	V_F	—	0.29	0.32	Vdc
Forward Voltage ($I_F = 10\text{ mAdc}$)	V_F	—	0.35	0.40	Vdc
Forward Current (DC)	I_F	—	—	200	mAdc
Repetitive Peak Forward Current	I_{FRM}	—	—	300	mAdc
Non repetitive Peak Forward Current ($t < 1.0\text{ s}$)	I_{FSM}	—	—	600	mAdc

RATINGS AND CHARACTERISTIC CURVES BAT54 / BAT54A / BAT54C / BAT54S

Figure 1. Recovery Time Equivalent Test Circuit



- Notes:
1. A $2.0 \text{ k}\Omega$ variable resistor adjusted for a Forward Current (I_F) of 10 mA .
 2. Input pulse is adjusted so $I_{R(\text{peak})}$ is equal to 10 mA .
 3. $t_p \gg t_{rr}$

Figure 2. Forward Voltage

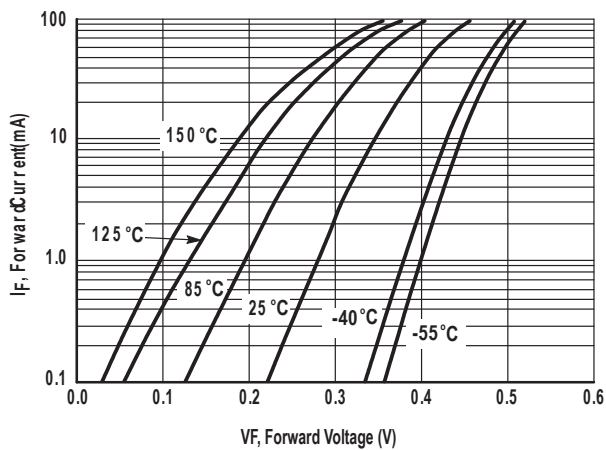


Figure 3. Leakage Current

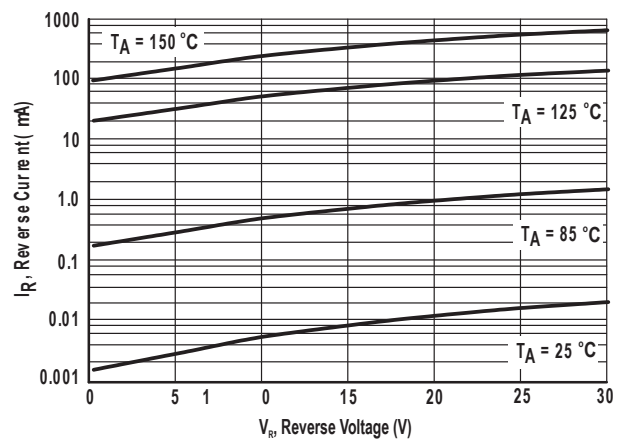


Figure 4. Total Capacitance

