

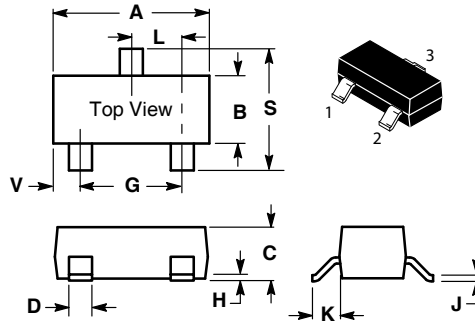
PB FREE PRODUCT

FEATURES

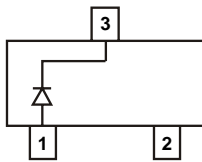
- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection

MECHANICAL DATA

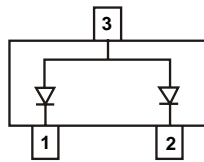
- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.008 grams (approx.)
- Mounting Position: Any



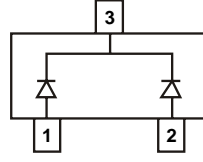
SOT-23		
Dim	Min	Max
A	2.800	3.040
B	1.200	1.400
C	0.890	1.110
D	0.370	0.500
G	1.780	2.040
H	0.013	0.100
J	0.085	0.177
K	0.450	0.600
L	0.890	1.020
S	2.100	2.500
V	0.450	0.600
All Dimension in mm		



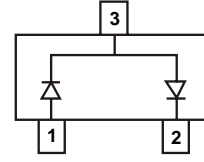
BAT54 Marking: LV3,KL1



BAT54A Marking: B6,KL2



BAT54C Marking: B5,KL3



BAT54S Marking: LD3,KL4

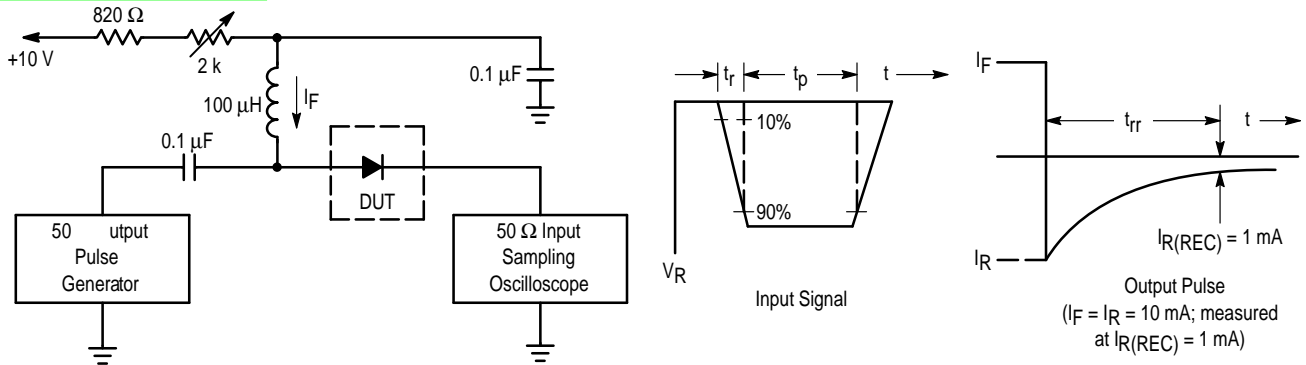
MAXIMUM RATINGS (T_J = 125°C unless otherwise noted)

Rating	Symbol	Value	Unit
Reverse Voltage	V _R	30	Volts
Forward Power Dissipation @ T _A = 25°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°C unless otherwise noted) (EACH DIODE)

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage (I _R = 10 μA)	V _{(BR)R}	30	—	—	Volts
Total Capacitance (V _R = 1.0 V, f = 1.0 MHz)	C _T	—	7.6	10	pF
Reverse Leakage (V _R = 25 V)	I _R	—	0.5	2.0	μA _{dc}
Forward Voltage (I _F = 0.1 mA _{dc})	V _F	—	0.22	0.24	V _{dc}
Forward Voltage (I _F = 30 mA _{dc})	V _F	—	0.41	0.5	V _{dc}
Forward Voltage (I _F = 100 mA _{dc})	V _F	—	0.52	1.0	V _{dc}
Reverse Recovery Time (I _F = I _R = 10 mA _{dc} , I _{R(REC)} = 1.0 mA _{dc}) Figure 1	t _{rr}	—	—	5.0	ns
Forward Voltage (I _F = 1.0 mA _{dc})	V _F	—	0.29	0.32	V _{dc}
Forward Voltage (I _F = 10 mA _{dc})	V _F	—	0.35	0.40	V _{dc}
Forward Current (DC)	I _F	—	—	200	mA _{dc}
Repetitive Peak Forward Current	I _{FRM}	—	—	300	mA _{dc}
Non-Repetitive Peak Forward Current (t < 1.0 s)	I _{FSM}	—	—	600	mA _{dc}

PB FREE PRODUCT



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

Figure 1. Recovery Time Equivalent Test Circuit

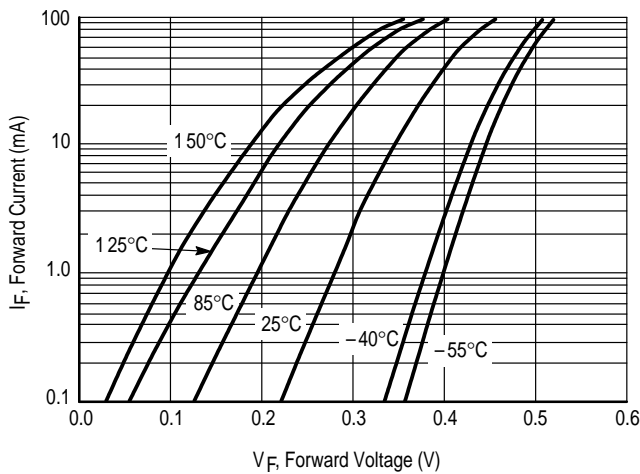


Figure 2. Forward Voltage

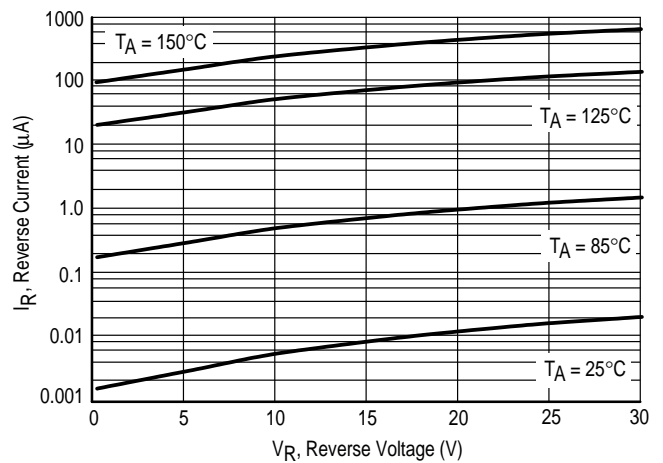


Figure 3. Leakage Current

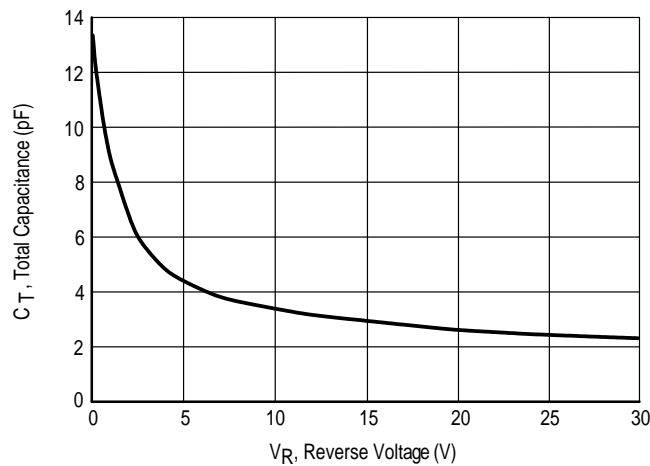


Figure 4. Total Capacitance