

Surface Mount Schottky Diode



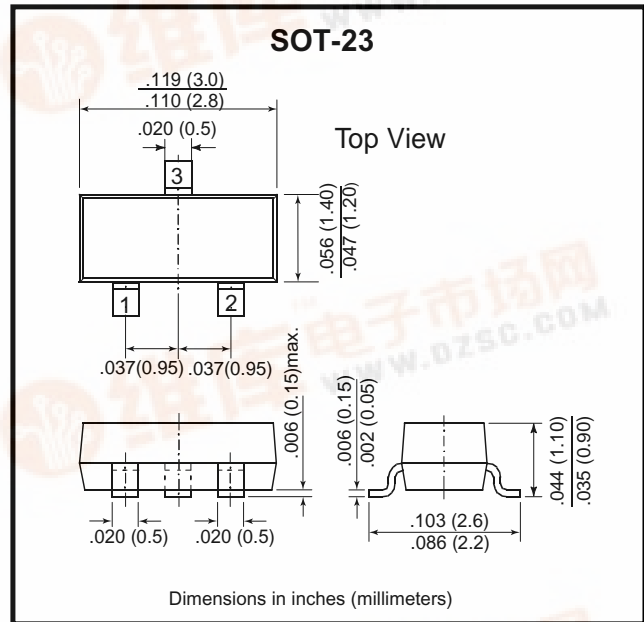
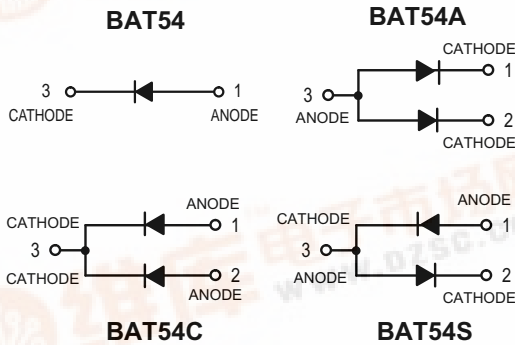
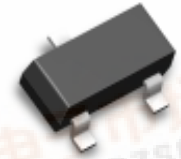
BAT54 Series Voltage: 30 Volts Current: 200mA

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



Maximum Ratings (T_A = 125°C unless otherwise noted)

Rating	Symbol	Value	Units
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

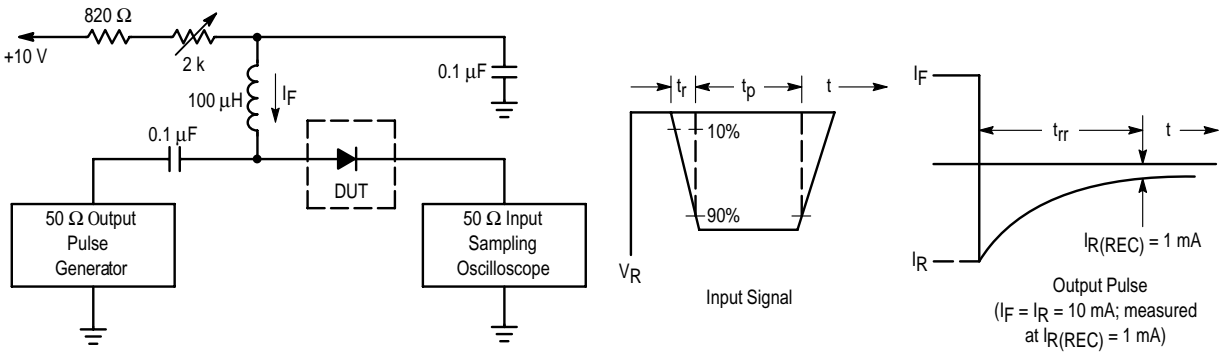
Electrical Characteristics (T_A = 25°C unless otherwise noted) (EACH DIODE)

Parameter	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage (I _R = 10 mA)	V _{(BR)R}	30	—	—	Volts
Total Capacitance (V _R = 1.0 V, f = 1.0 MHz)	C _T	—	7.60	10.0	pF
Reverse Leakage (V _R = 25 V)	I _R	—	0.50	2.0	mAdc
Forward Voltage (I _F = 0.1 mAdc) (I _F = 30 mAdc) (I _F = 100 mAdc)	V _F	—	0.22 0.41 0.52	0.24 0.5 1.0	Vdc
Reverse Recovery Time (I _F = I _R = 10 mAdc, I _R (REC) = 1.0 mAdc) Figure 1	t _{rr}	—	—	5.0	ns
Forward Voltage (I _F = 1.0 mAdc) (I _F = 10 mAdc)	V _F	—	0.29 0.35	0.32 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 s)	I _{FSM}	—	—	600	mAdc



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RATING AND CHARACTERISTIC CURVES (BAT54 Series)



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

Figure 1. Recovery Time Equivalent Test Circuit

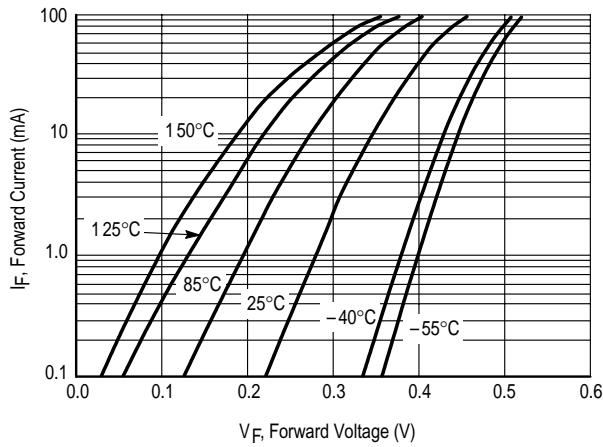


Figure 2. Forward Voltage

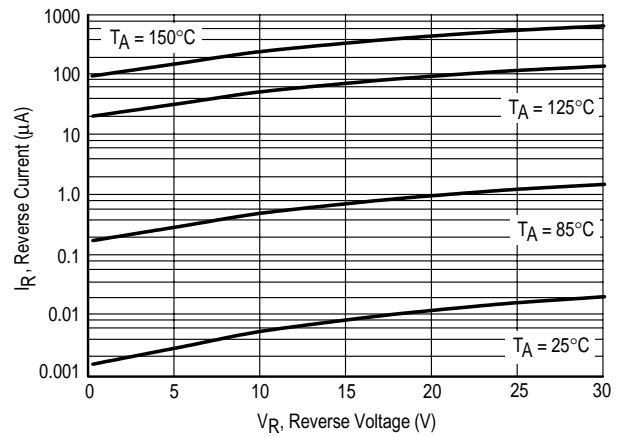


Figure 3. Leakage Current

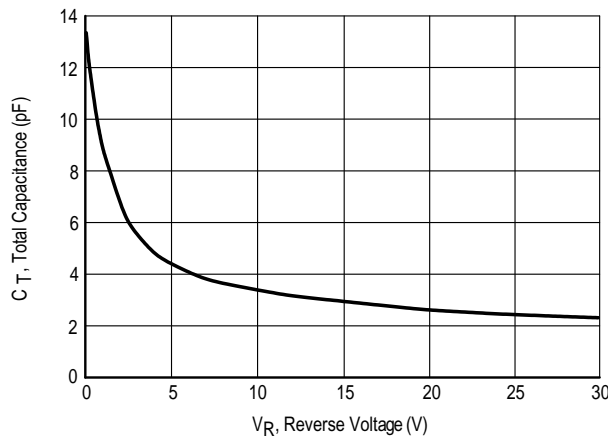


Figure 4. Total Capacitance