

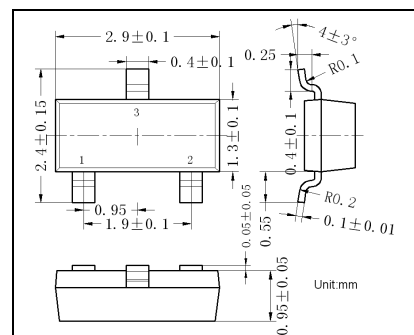
SOT-23 Plastic-Encapsulate Diodes

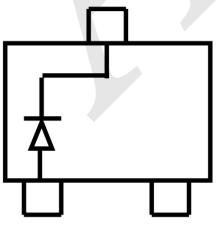
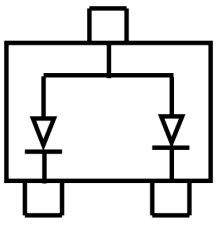
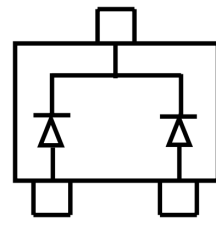
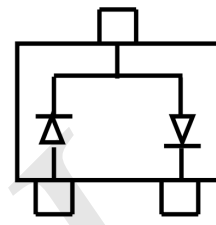
BAT54/A/C/S

Schottky Barrier Diode

Features

- Extremely Fast Switching Speed



BAT54	BAT54A	BAT54C	BAT54S
			
Marking: KL1	Marking: KL2	Marking: KL3	Marking: KL4

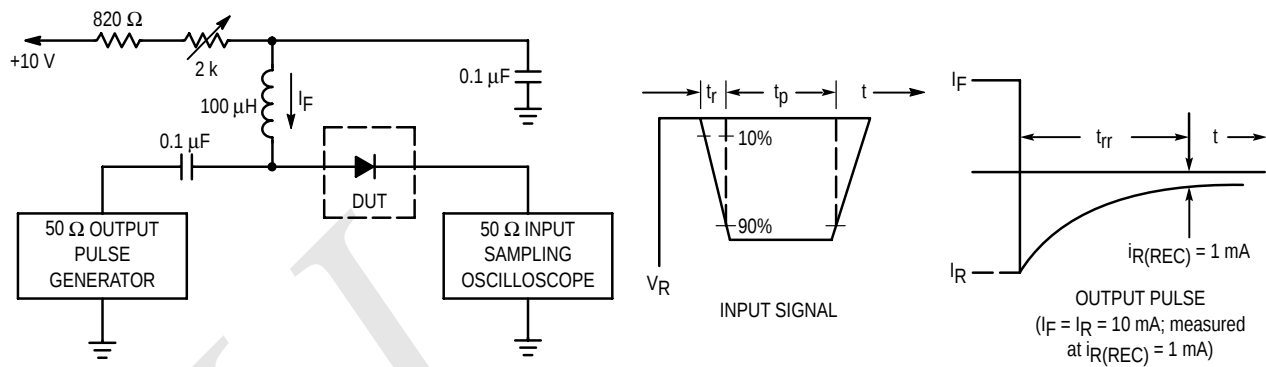
Maximum Ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{RRM}	Peak Repetitive Reverse Voltage	30	V
V_{RWM}	Working Peak Reverse Voltage		
V_R	DC blocking voltage		
I_{FM}	Forward Continuous Current	200	mA
I_{FSM}	Non-Repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	600	mA
I_{FRM}	Repetitive Peak Forward Current @ $t \leq 1\text{s}, \delta \leq 0.5$	300	mA
P_D	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	500	$^{\circ}\text{C}/\text{W}$
T_j	Junction Temperature	-40 ~ +125	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55 ~ +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

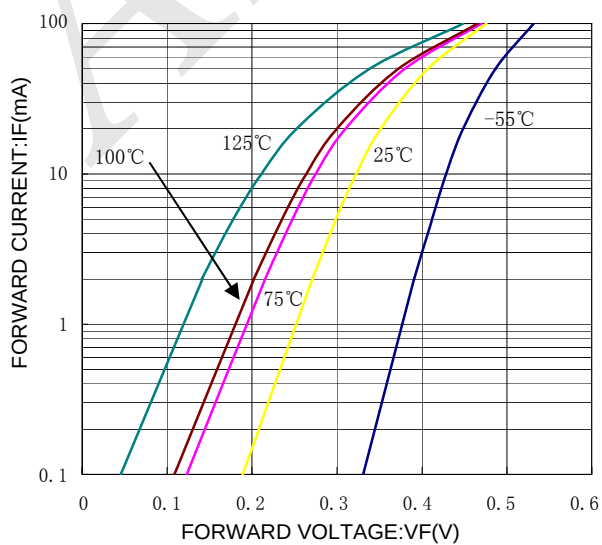
Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse breakdown voltage	$I_R = 100\mu\text{A}$	30			V
V_F	Forward voltage	$I_F = 0.1\text{mA}$			0.24	V
		$I_F = 1\text{mA}$			0.32	V
		$I_F = 10\text{mA}$			0.40	V
		$I_F = 30\text{mA}$			0.50	V
		$I_F = 100\text{mA}$			1.0	V
I_R	Reverse current	$V_R = 25\text{V}$			2	μA
C_D	Diode capacitance	$V_R = 0, f = 1\text{MHz}$			10	pF
t_{rr}	Reverse recovery time	$I_F = I_R = 10\text{mA}, I_{rr} = 0.1 \times I_R$ $R_L = 100\Omega$			5	ns

Typical Characteristics

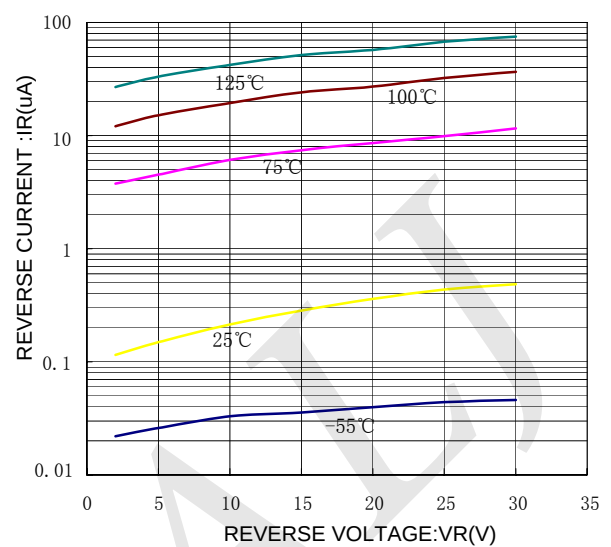


- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
 2. Input pulse is adjusted so $I_{R(\text{peak})}$ is equal to 10 mA.
 3. $t_p \gg t_{rr}$

RECOVERY TIME EQUIVALENT TEST CIRCUIT



FORWARD CHARACTERISTICS



REVERSE CHARACTERISTICS

