

RoHS Compliant Product

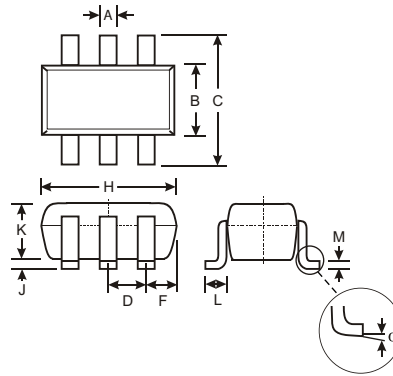
A suffix of "-C" specifies halogen & lead-free

**FEATURES**

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

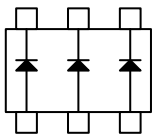
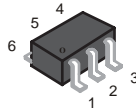
**MECHANICAL DATA**

- Case: SOT-363, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.016 grams (approx.)
- Mounting Position: Any

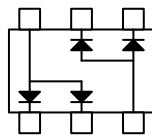


SOT-363		
Dim	Min	Max
A	0.10	0.30
B	1.15	1.35
C	2.00	2.20
D	0.65 Nominal	
F	0.30	0.40
H	1.80	2.20
J	—	0.10
K	0.90	1.00
L	0.25	0.40
M	0.10	0.25
$\alpha$	0°	8°

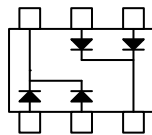
All Dimensions in mm



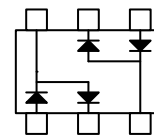
BAT54TW Marking: KLA



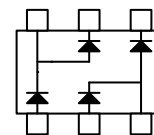
BAT54ADW Marking: KL6



BAT54CDW Marking: KL7



BAT54SDW Marking: KL8



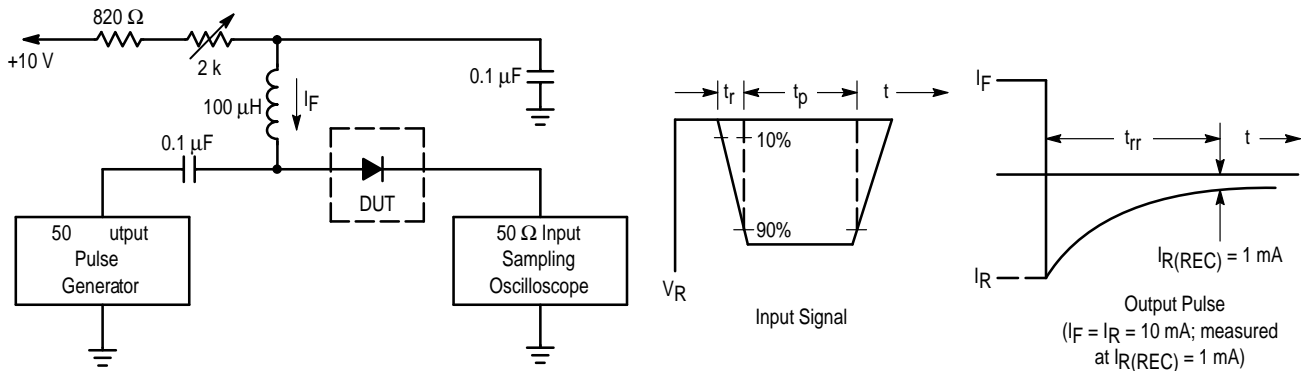
BAT54BRW Marking: KLB

**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 $25^\circ\text{C}$	$P_F$	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

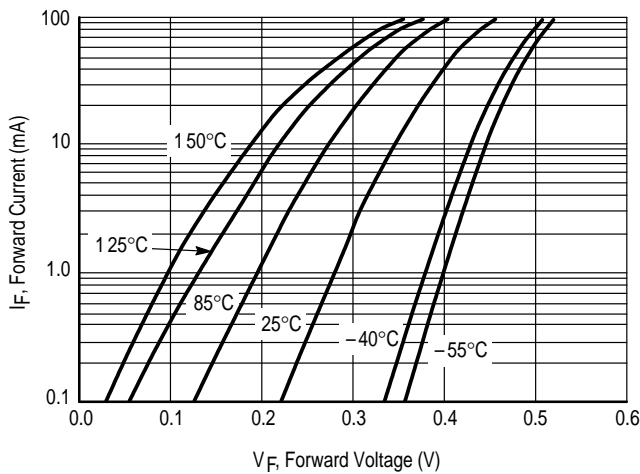
**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted) (EACH DIODE)

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Breakdown Voltage ( $I_R = 10 \mu\text{A}$ )	$V_{(BR)R}$	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	$\mu\text{A}_{dc}$
Forward Voltage ( $I_F = 0.1 \text{ mA}_{dc}$ )	$V_F$	—	0.22	0.24	V <sub>dc</sub>
Forward Voltage ( $I_F = 30 \text{ mA}_{dc}$ )	$V_F$	—	0.41	0.5	V <sub>dc</sub>
Forward Voltage ( $I_F = 100 \text{ mA}_{dc}$ )	$V_F$	—	0.52	1.0	V <sub>dc</sub>
Reverse Recovery Time ( $I_F = I_R = 10 \text{ mA}_{dc}$ , $I_{R(REC)} = 1.0 \text{ mA}_{dc}$ ) Figure 1	$t_{rr}$	—	—	5.0	ns
Forward Voltage ( $I_F = 1.0 \text{ mA}_{dc}$ )	$V_F$	—	0.29	0.32	V <sub>dc</sub>
Forward Voltage ( $I_F = 10 \text{ mA}_{dc}$ )	$V_F$	—	0.35	0.40	V <sub>dc</sub>
Forward Current (DC)	$I_F$	—	—	200	mA <sub>dc</sub>
Repetitive Peak Forward Current	$I_{FRM}$	—	—	300	mA <sub>dc</sub>
Non-Repetitive Peak Forward Current ( $t < 1.0 \text{ s}$ )	$I_{FSM}$	—	—	600	mA <sub>dc</sub>

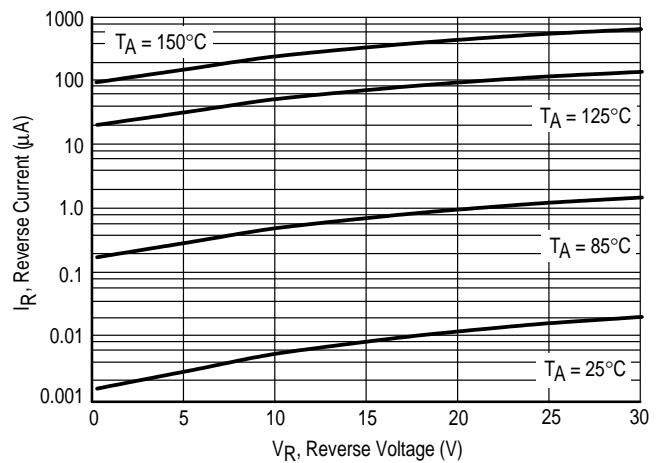


- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10 mA.  
2. Input pulse is adjusted so  $I_{R(peak)}$  is equal to 10 mA.  
3.  $t_p \gg t_{rr}$

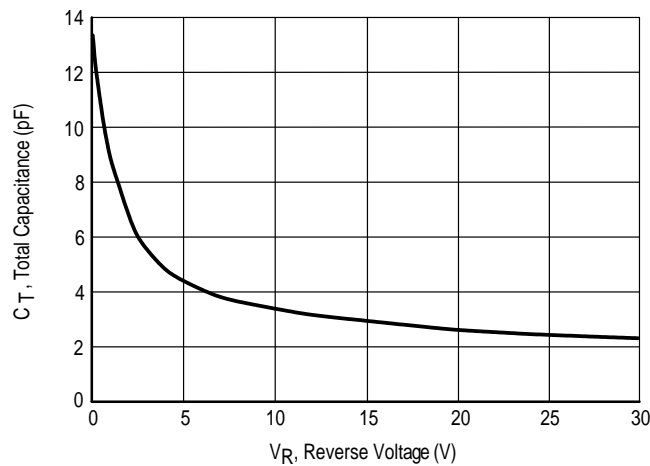
**Figure 1. Recovery Time Equivalent Test Circuit**



**Figure 2. Forward Voltage**



**Figure 3. Leakage Current**



**Figure 4. Total Capacitance**