



# THE DATASHEET OF BAT54CDW-TP



## Features

- Fast Switching and Low Forward Voltage Drop
- Ultra-Small Surface Mount Package
- PN Junction Guard Ring for Transient and ESD Protection
- Available in Lead Free Version
- Epoxy Meets UL 94 V-0 Flammability Rating
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: -65°C to +150°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance: 625°C/W Junction to Ambient

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum DC Blocking Voltage
BAT54ADW	KL6	30V	30V
BAT54CDW	KL7	30V	30V
BAT54SDW	KL8	30V	30V
BAT54BRW	KLB	30V	30V
BAT54TW	KLA	30V	30V

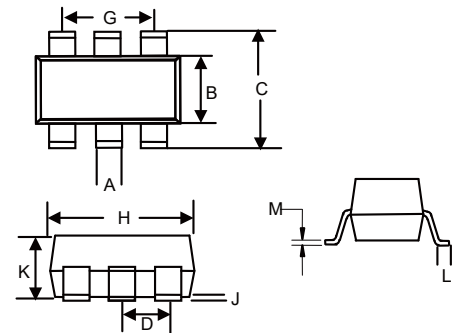
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	200mA	$T_A = 25^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	600mA	$t < 1\text{s}$
Repetitive Peak Forward Current	$I_{FRM}$	300mA	
Power Dissipation	$P_d$	200mW	$T_A = 25^\circ\text{C}$
Maximum Forward Voltage	$V_F$	240mV 320mV 400mV 500mV 1000mV	$I_F = 0.1\text{mA}$ $I_F = 1.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 30\text{mA}$ $I_F = 100\text{mA}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	2.0µA	$V_R = 25\text{V}$
Maximum Reverse Breakdown Voltage	$V_{(BR)}$	>30V	
Maximum Junction Capacitance	$C_J$	10pF	Measured at 1.0MHz, $V_R = 1.0\text{V}$
Maximum Reverse Recovery Time	$t_{rr}$	5.0ns	$I_F = I_R = 10\text{mA}$ , $I_{rr} = 0.1 \times I_R$ , $R_L = 100\Omega$

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

# 200mW, 30Volt Schottky Barrier Diode

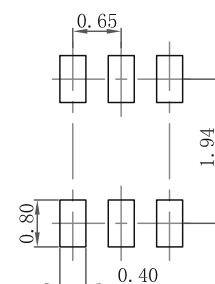
## SOT-363



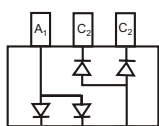
### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.006	0.014	0.15	0.35	
B	0.045	0.053	1.15	1.35	
C	0.079	0.096	2.00	2.45	
D	0.026		0.65 Nominal		
G	0.047	0.055	1.20	1.40	
H	0.071	0.087	1.80	2.20	
J	----	0.004	----	0.10	
K	0.031	0.043	0.80	1.10	
L	0.010	0.018	0.26	0.46	
M	0.003	0.006	0.08	0.15	

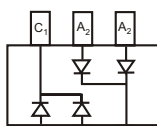
### Suggested Solder Pad Layout



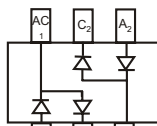
**Internal Structure:**



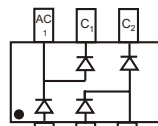
BAT54ADW\*



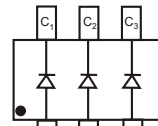
BAT54CDW\*



BAT54SDW\*



BAT54BRW



BAT54TW

\*Symmetrical configuration, no orientation indicator.

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

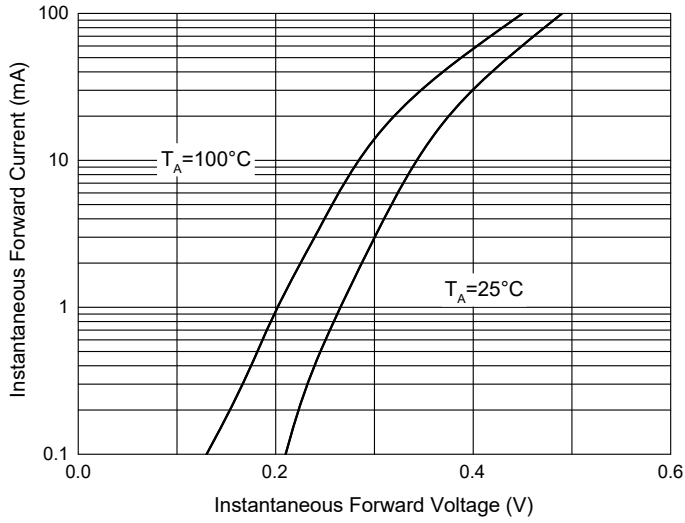


Fig. 2 - Typical Reverse Leakage Characteristics

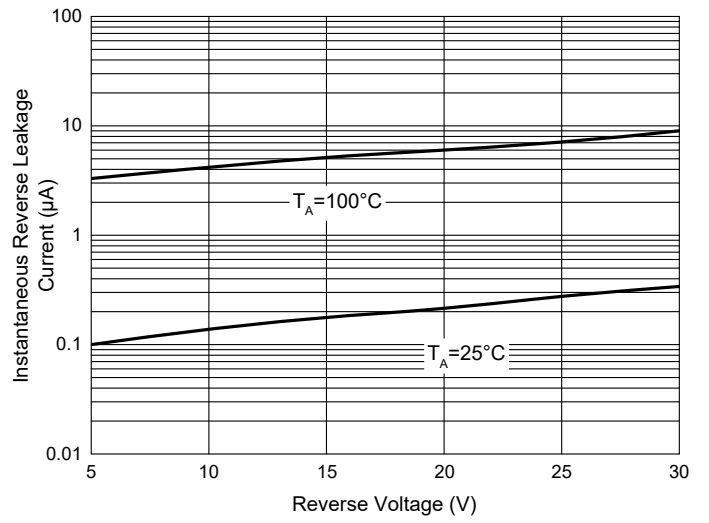
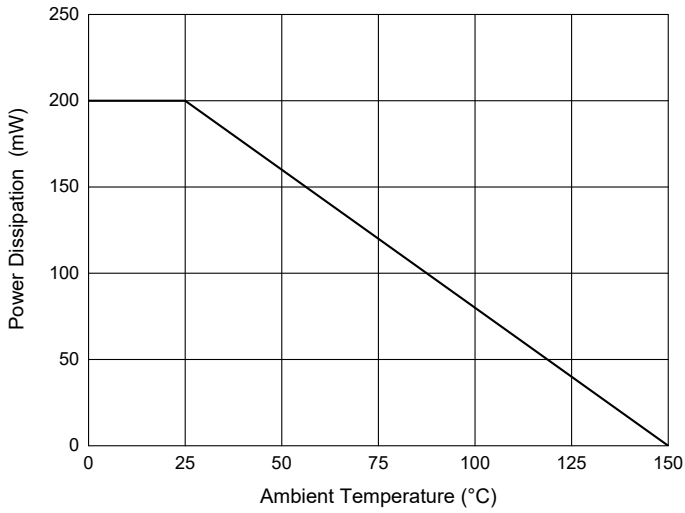


Fig. 3 - Power Derating Curve



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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