

Features

- Low Forward Voltage
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/Rohs Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance(Note2): 400°C/W Junction to Ambient

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	RMS Reverse Voltage $V_{R(RMS)}$	Maximum DC Blocking Voltage
BAT54	KL1	30V	21V	30V
BAT54A	KL2	30V	21V	30V
BAT54C	KL3	30V	21V	30V
BAT54S	KL4	30V	21V	30V

Electrical Characteristics @ 25°C Unless Otherwise Specified

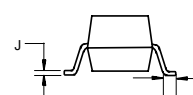
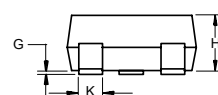
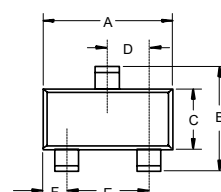
Average Forward Current	$I_{F(AV)}$	200mA	
Peak Forward Surge Current	I_{FSM}	600mA	$t < 1s$
Power Dissipation	P_d	250mW	$T_A = 25^\circ C$
Maximum Forward Voltage	V_F	240mV 320mV 400mV 500mV 800mV	$I_F = 0.1mA$ $I_F = 1.0mA$ $I_F = 10mA$ $I_F = 30mA$ $I_F = 100mA$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	2μA	$V_R = 25V$
Minimum Reverse Breakdown Voltage	$V_{(BR)}$	30V	$I_R = 100μA$
Maximum Junction Capacitance	C_J	10.0pF	Measured at 1.0MHz, $V_R = 1.0V$
Maximum Reverse Recovery Time	t_{rr}	5.0ns	$I_F = I_R = 10mA$; $I_{rr} = 0.1 \times I_R, R_L = 100Ω$

Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Device mounted on an 1inchx1inchx2oz copper FR4 PCB, single-sided copper, reference footprint

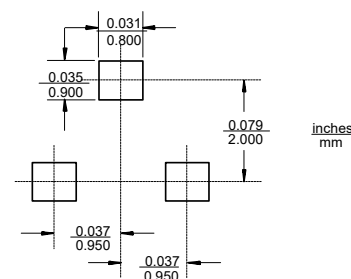
250mW, 30V Schottky Barrier Diode

SOT-23

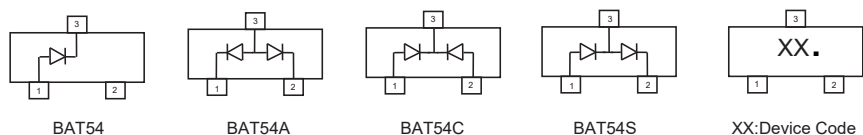


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.012	0.020	0.30	0.51	
L	0.007	0.020	0.20	0.50	

Suggested Solder Pad Layout



Internal Structure and Marking Code



Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

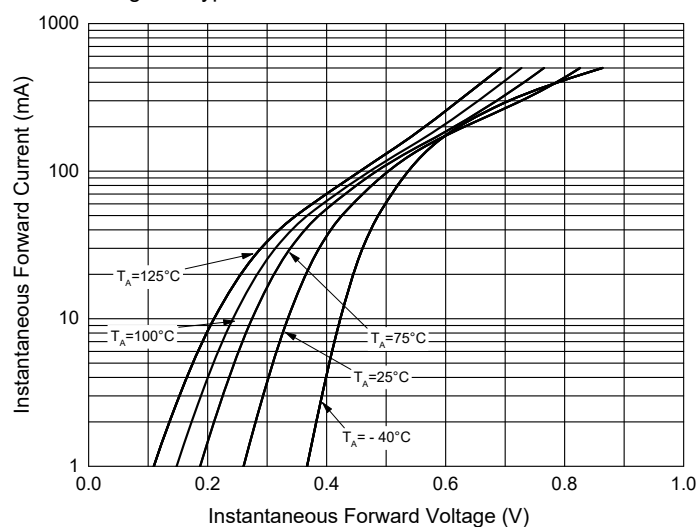


Fig. 2 - Typical Reverse Leakage Characteristics

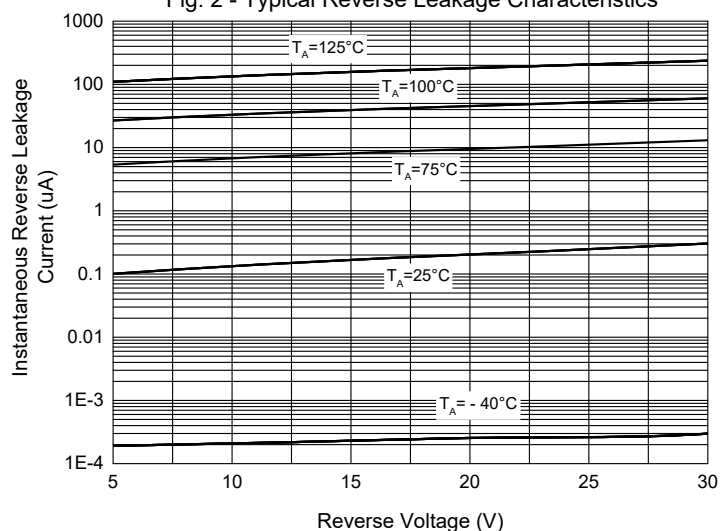


Fig. 3 - Capacitance Characteristics

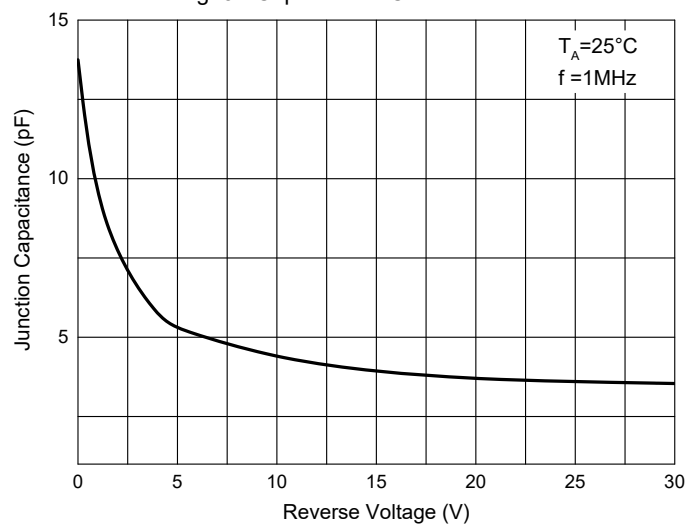
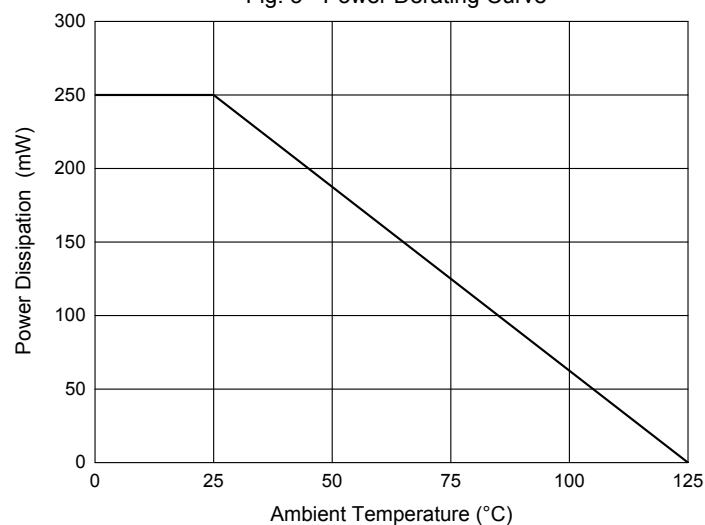


Fig. 3 - Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel
Part Number-13P	Tape&Reel: 10Kpcs/Reel

For packaging details, go to our website at: https://www.mccsemi.com/pdf/productpackaging/SOT-23_Packing_Rev_I.pdf

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