

Features

- Ultra-Small Surface Mount Package
- Low Forward Voltage Drop
- PN Junction Guard Ring for Transient and ESD Protection
- 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 +125°C
- Storage Temperature Range: -65°C to +150°C
- Thermal Resistance: 667°C/W Junction to Ambient

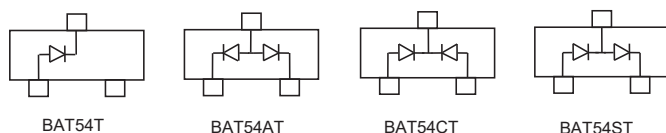
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum DC Blocking Voltage
BAT54T	L1	30V	30V
BAT54AT	L2	30V	30V
BAT54CT	L3	30V	30V
BAT54ST	L4	30V	30V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Maximum Reverse Breakdown Voltage	$V_{(BR)}$	>30V	$I_R = 100\mu A$
Average Forward Current	I_F	200mA	
Power Dissipation	P_d	150mW	
Peak Forward Surge Current	I_{FSM}	600mA	$t < 1s$
Repetitive Peak Forward Current	I_{FRM}	300mA	
Maximum Forward Voltage	V_F	240mV 320mV 400mV 500mV 1000mV	$I_F = 0.1mA$ $I_F = 1.0mA$ $I_F = 10mA$ $I_F = 30mA$ $I_F = 100mA$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	2 μA	$V_R = 25V$
Maximum Total Capacitance	C_T	10.0pF	Measured at 1.0MHz, $V_R = 1.0V$
Maximum Reverse Recovery Time	t_{rr}	5nS	$I_F = I_R = 10mA$, $I_{rr} = 0.1 \times I_R$, $R_L = 100\Omega$

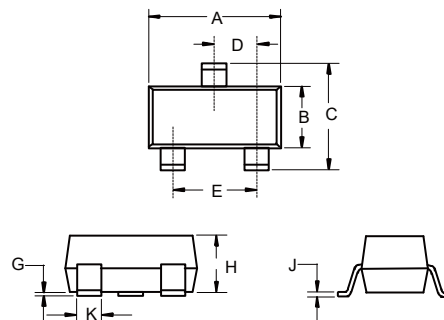
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure:



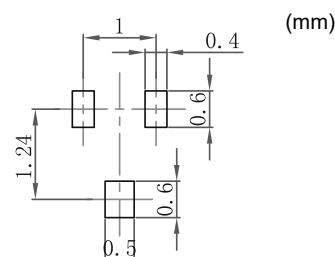
150mW, 30V Schottky Barrier Diode

SOT-523



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.059	0.067	1.50	1.70	
B	0.030	0.033	0.75	0.85	
C	0.057	0.069	1.45	1.75	
D	0.020	Nominal	0.50	Nominal	
E	0.035	0.043	0.90	1.10	
G	0.000	0.004	0.00	0.10	
H	0.024	0.031	0.60	0.80	
J	0.004	0.008	0.10	0.20	
K	0.006	0.014	0.15	0.35	

Suggested Solder Pad Layout



Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

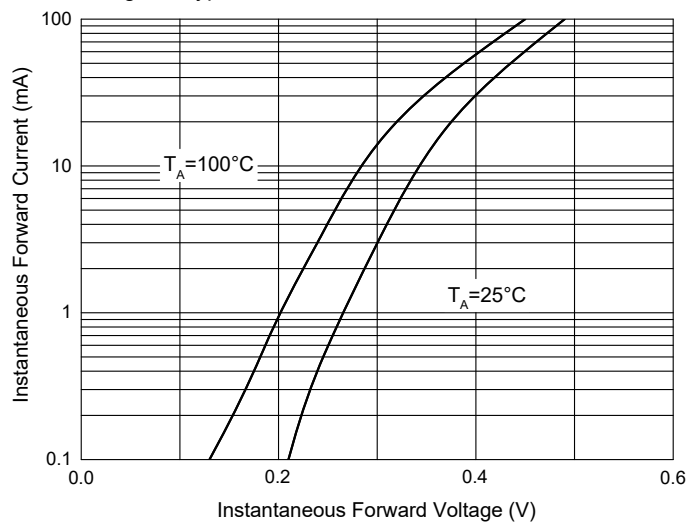


Fig. 2 - Typical Reverse Leakage Characteristics

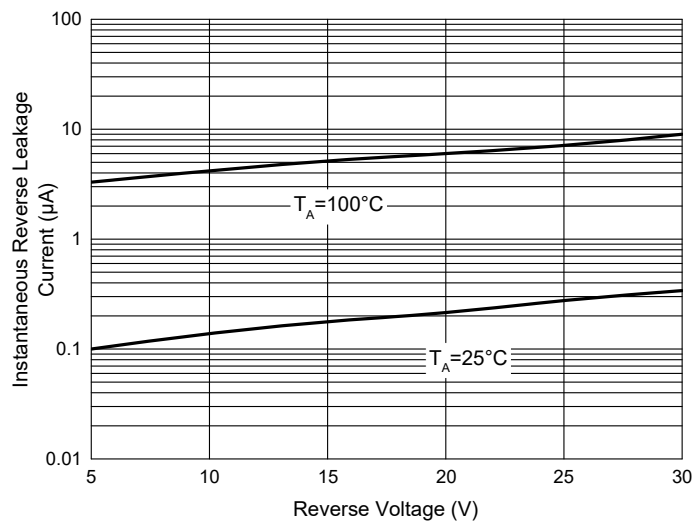
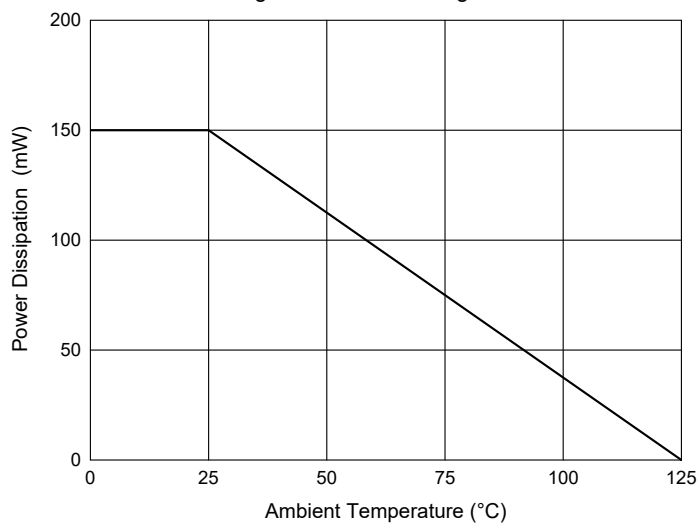


Fig. 3 - Power Derating Curve



Ordering Information

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

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