

## Features

- Halogen Free. "Green" Device (Note 1)
- Fully Automotive Qualified to AEC-Q101
- Low Forward Voltage
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 625°C/W Junction to Ambient

MCC Part Number	Repetitive Peak Reverse Voltage $V_{RRM}$	RMS Reverse Voltage $V_{R(RMS)}$	DC Blocking Voltage $V_R$
BAT54WTHQ	30V	21V	30V
BAT54AWTHQ	30V	21V	30V
BAT54CWTHQ	30V	21V	30V
BAT54SWTHQ	30V	21V	30V

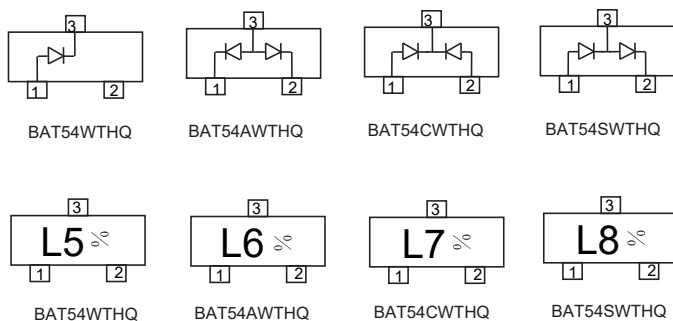
## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	200mA	(Note 2)
Peak Forward Surge Current	$I_{FSM}$	600mA	$t < 1s$
Power Dissipation	$P_d$	200mW	$T_A = 25^\circ C$

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

Note: 2. Mounted on FR-4 board with recommended pad layout.

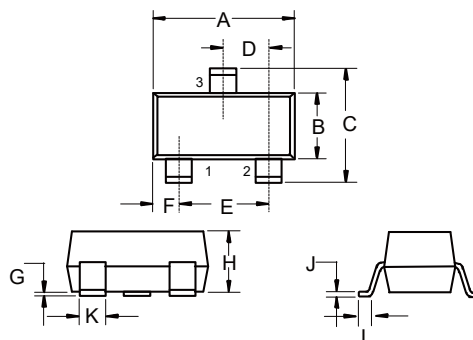
## Internal Structure and Marking Code



Note: 3.  $\infty$  = placeholder for date code

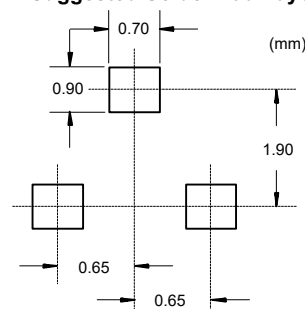
# 200mW, 30V Schottky Barrier Diode

## SOT-323



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.071	0.087	1.80	2.20	
B	0.045	0.053	1.15	1.35	
C	0.083	0.096	2.10	2.45	
D	0.026		0.65		TYP.
E	0.047	0.055	1.20	1.40	
F	0.012	0.016	0.30	0.40	
G	0.000	0.004	0.00	0.10	
H	0.035	0.044	0.90	1.10	
J	0.002	0.010	0.05	0.25	
K	0.006	0.016	0.15	0.40	
L	0.010	0.018	0.26	0.46	

## Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	$V_{BR}$	$I_R=10\mu A$	30			V
Forward Voltage	$V_F$	$I_F=0.1mA$			0.24	V
		$I_F=1mA$			0.32	V
		$I_F=10mA$			0.40	V
		$I_F=30mA$			0.50	V
		$I_F=100mA$			1.00	V
Reverse Current	$I_R$	$V_R=25V$			2.00	$\mu A$
Junction Capacitance	$C_J$	$V_R = 1V, f = 1MHz$			10	pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10mA,$ $I_{rr}=0.1\times I_R, R_L=100\Omega$			5	ns

Pulse Test: Pulse Width 300  $\mu sec$ , Duty Cycle 2%

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

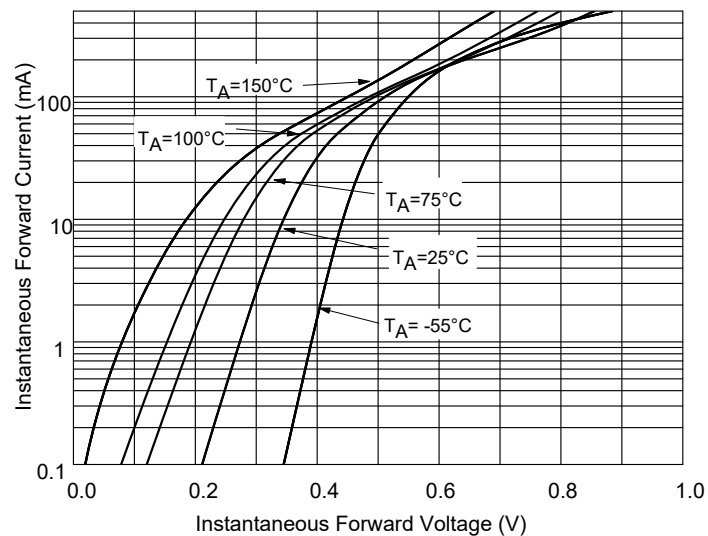


Fig. 2 - Typical Reverse Leakage Characteristics

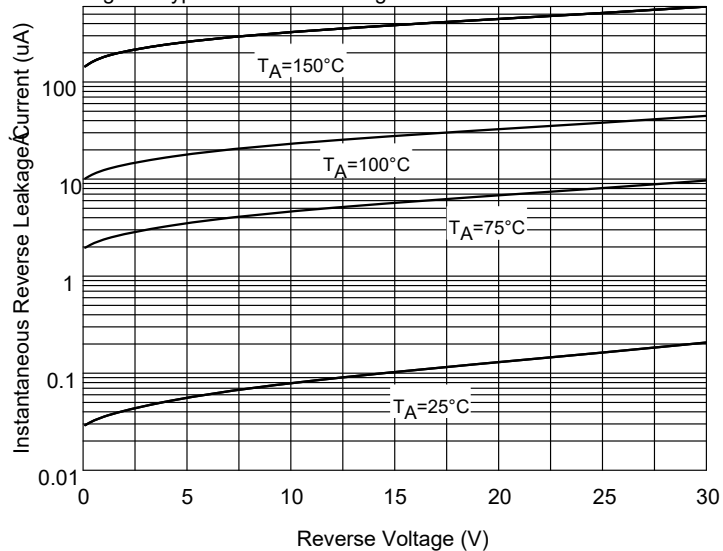


Fig. 3 - Capacitance Characteristics

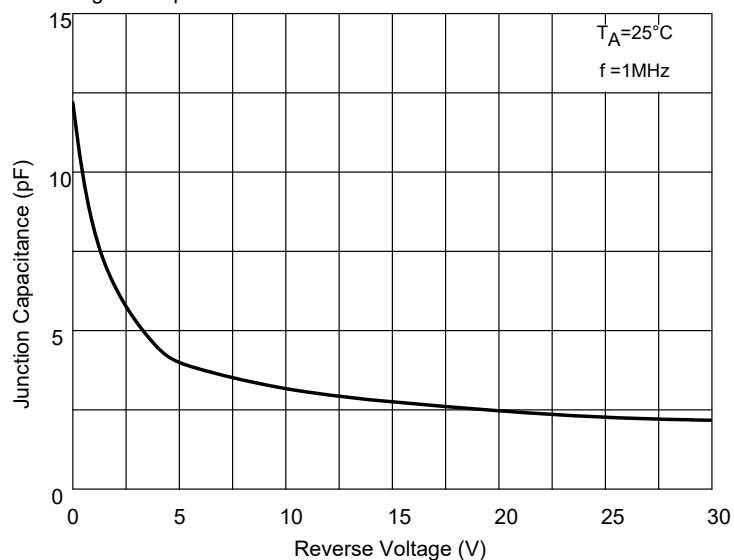
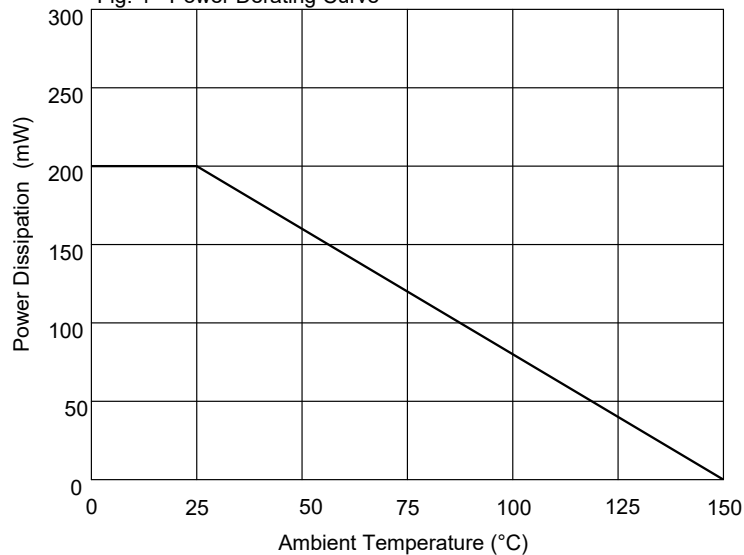


Fig. 4 - Power Derating Curve



## Ordering Information

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

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