

Features

- Integrated Diffused Guard Ring
- Low Forward Voltage
- For low-Loss, Fast-Recovery, Meter Protection, Bias Isolation and Clamping Applications
- 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: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 500°C/W Junction to Ambient

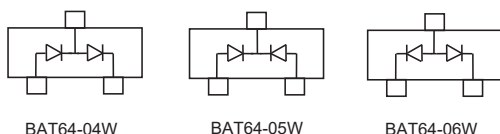
MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum DC Blocking Voltage
BAT64-04W	64S	40V	40V
BAT64-05W	65S	40V	40V
BAT64-06W	66S	40V	40V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	250mA	$T_A = 25^\circ\text{C}$
Peak Forward Surge Current	I_{FSM}	800mA	$t_p = 10\text{ms}$
Power Dissipation	P_d	250mW	
Maximum Forward Voltage	V_F	350mV 430mV 520mV 750mV	$I_F = 1.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 30\text{mA}$ $I_F = 100\text{mA}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	2.0μA	$V_R = 30\text{V}$
Maximum Junction Capacitance	C_T	30pF	Measured at 1.0MHz, $V_R = 5.0\text{V}$
Maximum Reverse Recovery Time	t_{rr}	5.0ns	$I_F = 10\text{mA}, I_R = 10\text{mA}, I_{tr} = 1\text{mA}, R_L = 100\Omega$

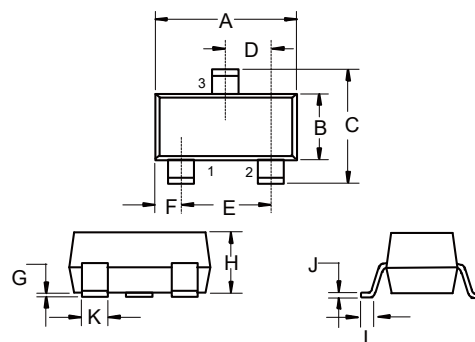
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure:



250mW, 40V Schottky Barrier Diode

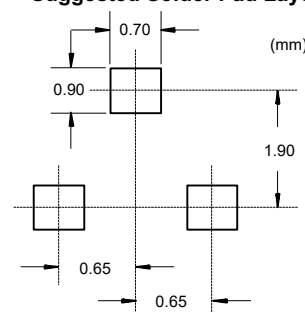
SOT-323



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



Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

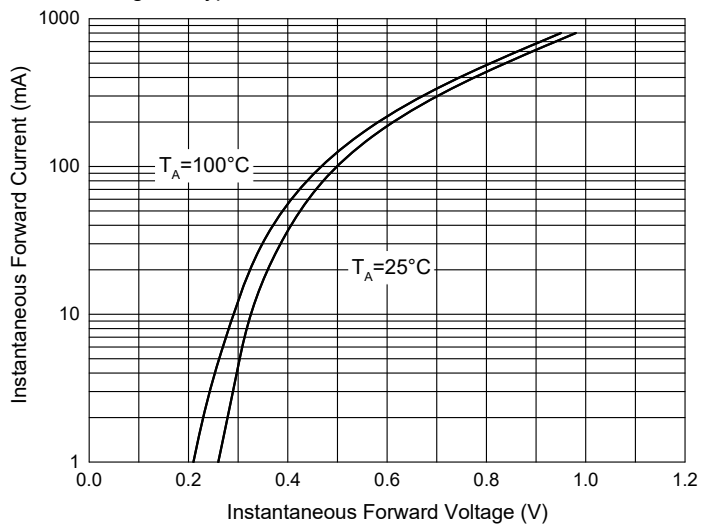


Fig. 2 - Typical Reverse Leakage Characteristics

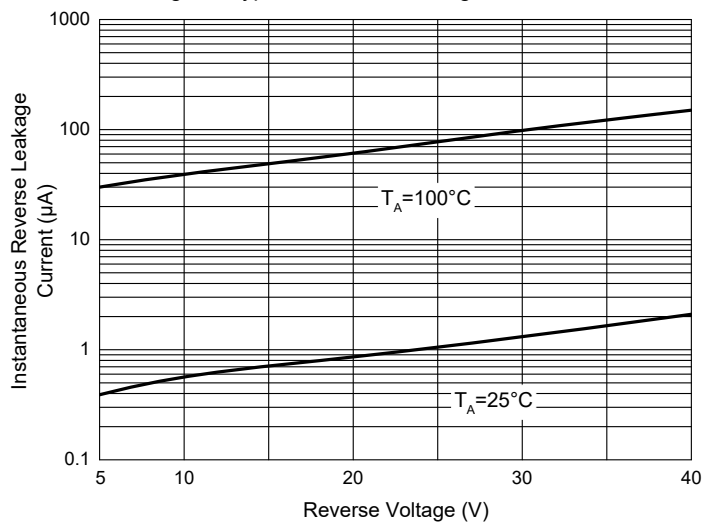


Fig. 3 - Power Derating Curve

