



# THE DATASHEET OF BAT42W-TP



## Features

- Halogen Free. "Green" Device (Note 1)
- For General Purpose Applications
- These Diodes are Also Available in The DO-35 Case With The Type Designations BAT42 to BAT43 and in The MiniMELF Case With The Type Designations LL42 to LL43.
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 300°C/W Junction to Ambient Air<sup>(1)</sup>

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
BAT42W	S7	30V	21V	30V
BAT43W	S8	30V	21V	30V

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Forward DC Current	$I_F$	200mA	$T_{amb}=25^\circ C$
Repetitive Peak Forward Current	$I_{FRM}$	500mA	$t_p < 1s, T_{amb}=25^\circ C^{(2)}$
Surge Forward Current	$I_{FSM}$	4.0A	$t_p < 10ms, T_j=25^\circ C^{(2)}$
Power Dissipation	$P_{tot}$	200mW	$T_{amb}=65^\circ C^{(2)}$
Reverse Breakdown Voltage	$V_{(BR)R}$	30V(Min)	$I_R=100\mu A$ dc Pulsed
Forward Voltage <sup>(3)</sup>	$V_F$	1.0V(Max)	$I_F=200mA$
BAT42W		0.4V(Max)	$I_F=10mA$
		0.65V(Max)	$I_F=50mA$
BAT43W		0.26V(Min)	$I_F=2.0mA$
		0.33V(Max)	$I_F=15mA$
		0.45V(Max)	$I_F=15mA$
Leakage Current <sup>(3)</sup>	$I_R$	0.5 $\mu A$ (Max) 100 $\mu A$ (Max)	$V_R=25V$ $V_R=25V, T_J=100^\circ C$
Typical Junction Capacitance	$C_{tot}$	7.0pF(Typ)	$V_R=1.0, f=1.0MHz$
Reverse Recovery Time	$t_{rr}$	5.0ns(Max)	$I_F=10mA, I_R=10mA$ $I_{rr}=1.0mA, R_L=100\Omega$

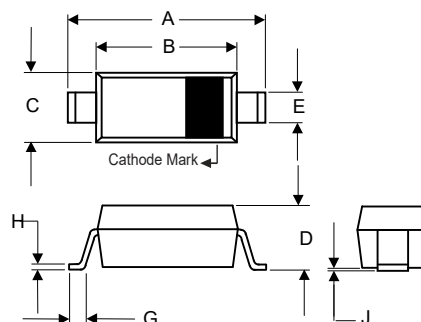
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Notes: 2. Valid provided that electrodes are kept at ambient temperature

Notes: 3. Pulse Test  $t_p < 300\mu s$ , Duty Cycle < 2%

# 200mW Schottky Diodes 30 Volts

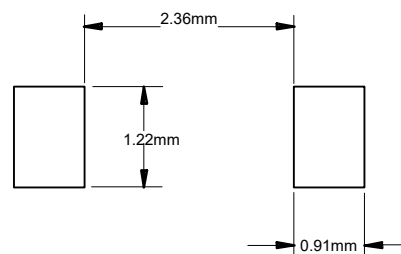
## SOD-123



### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.140	0.152	3.55	3.85	
B	0.100	0.112	2.55	2.85	
C	0.055	0.071	1.40	1.80	
D	----	0.053	----	1.35	
E	0.018	0.026	0.45	0.65	
G	0.006	----	0.15	----	
H	----	0.010	----	0.25	
J	----	0.006	----	0.15	

### Suggested Solder Pad Layout



**Curve Characteristics**

Fig. 1 - Forward Characteristics

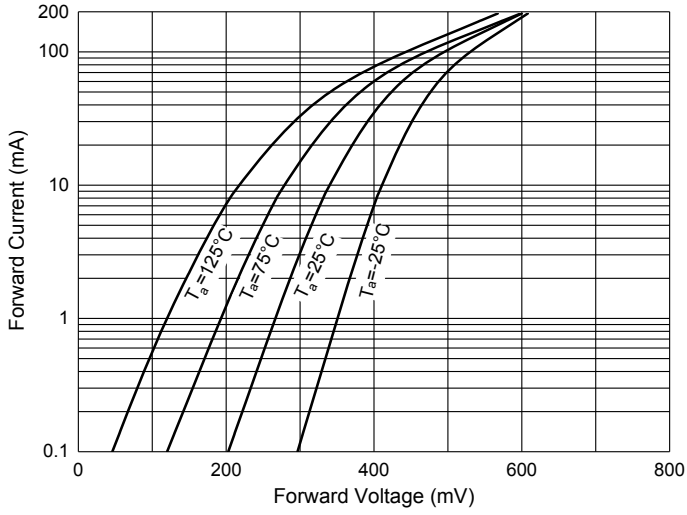


Fig. 2 - Reverse Characteristics

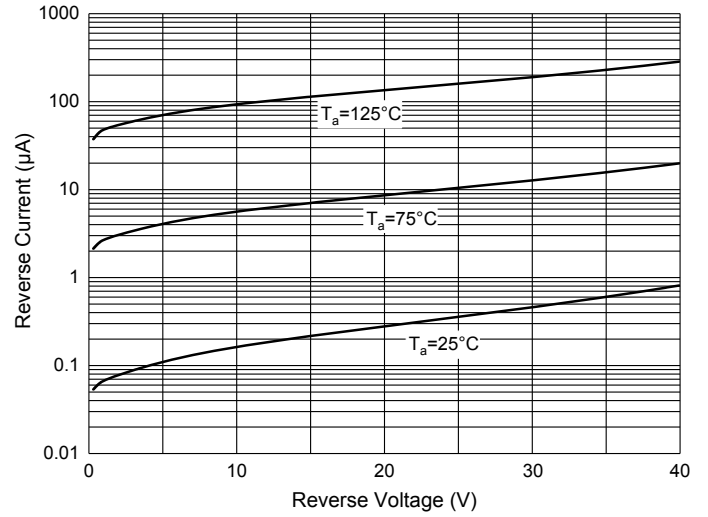


Fig. 3 - Capacitance Characteristics

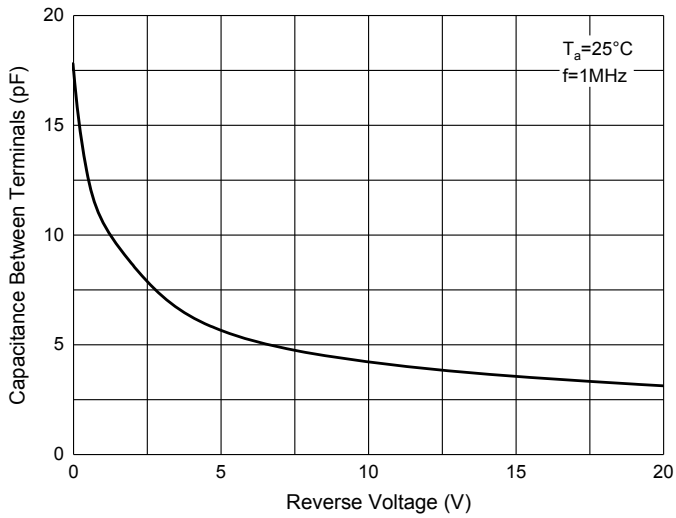
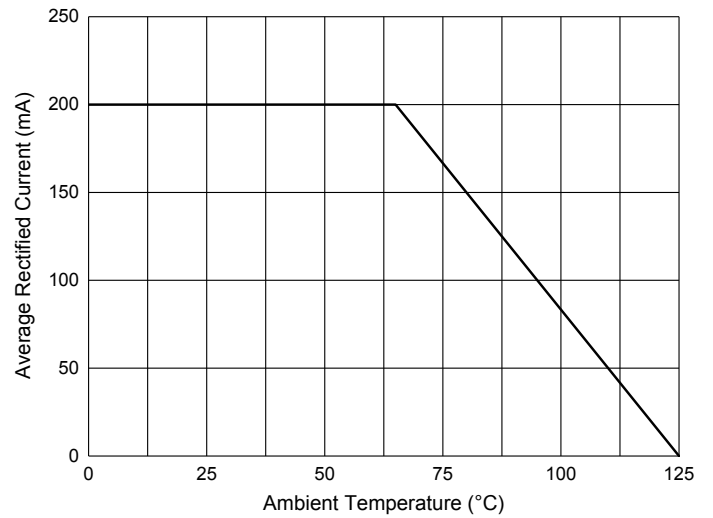


Fig. 4 - Forward Current Derating Curve



## Ordering Information

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

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