

**Features**

- Halogen Free. "Green" Device (Note 1)
- Fast Switching Speed
- Surface Mount Package Ideally Suited For Automatic Insertion
- Low Forward Voltage Drop.
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Polarity: Indicated By Cathode Band
- 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(Note 2): 500°C/W Junction to Ambient

MCC Part Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
BAT42WS	S7	30V	21V	30V
BAT43WS	S8	30V	21V	30V

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Forward Continuous Current(Note2)	$I_{FM}$	200mA	
Average Rectified Output Current	$I_O$	100mA	
Repetitive peak Forward Surge Current	$I_{FRM}$	500mA	$t_p < 1.0s$
Non-repetitive Peak Forward surge current	$I_{FSM}$	4A	$t < 10ms$
Power Dissipation	$P_D$	200mW	
Forward Voltage Drop(Note3) All Types	$V_F$	1.0V(Max) 0.40V(Max) 0.65V(Max)	$I_F=200mA;$ $I_F=10mA;$ $I_F=50mA;$
BAT42WS			
BAT43WS	0.26V(Min) 0.33V(Max) 0.45V(Max)	$I_F=2.0mA;$ $I_F=15mA;$	
Reverse Leakage Current	$I_{RM}$	500nA(Max) 100µA(Max)	$V_R=25V$ $V_R=25V T_J=100°C$
Junction Capacitance	$C_J$	10pF(Max)	$V_R=1V, f=1.0MHz$
Reverse Recovery Time	$t_{rr}$	5ns(Max)	$I_F=I_R=10mA$ $I_{rr}=0.1 I_R$ $R_L=100Ω$

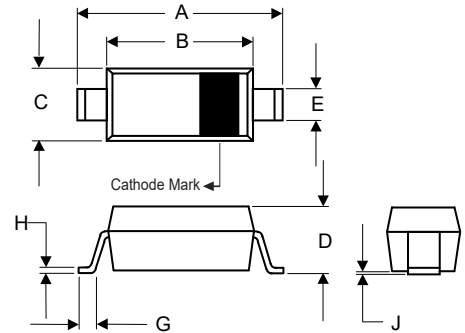
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Note: 2. Valid provided that terminals are kept at ambient temperature

Note: 3.  $t < 300us$ , duty cycle  $\leq 2\%$

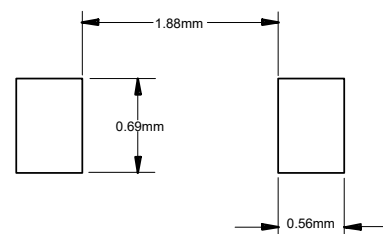
**Schottky Barrier Diode  
200mW**

**SOD-323**



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.090	0.107	2.30	2.70	
B	0.063	0.071	1.60	1.80	
C	0.045	0.053	1.15	1.35	
D	0.031	0.045	0.80	1.15	
E	0.010	0.016	0.25	0.40	
G	0.004	0.018	0.10	0.45	
H	0.004	0.010	0.10	0.25	
J	-----	0.006	-----	0.15	

**Suggested Solder Pad Layout**



**Curve Characteristics**

Fig. 1 - Forward Characteristics

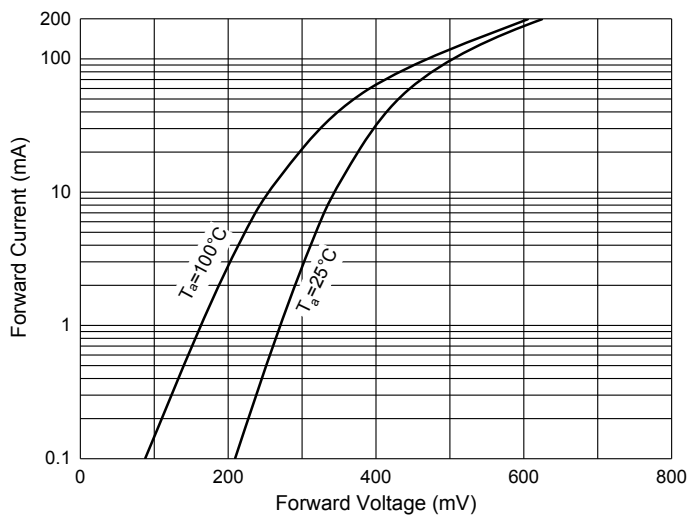


Fig. 2 - Reverse Characteristics

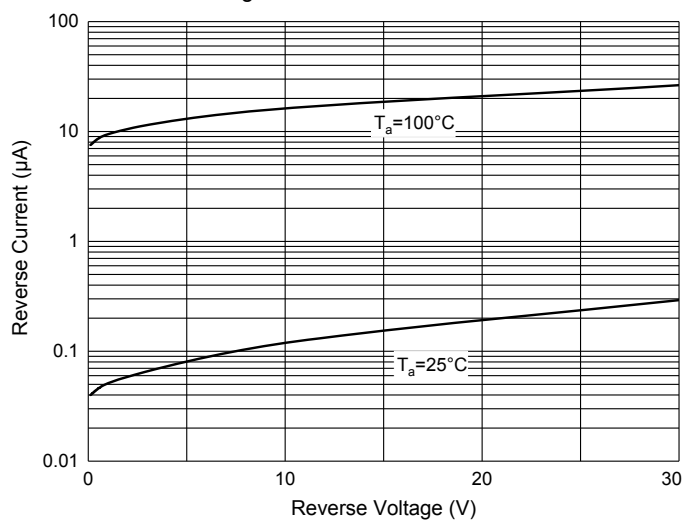


Fig. 3 - Capacitance Characteristics

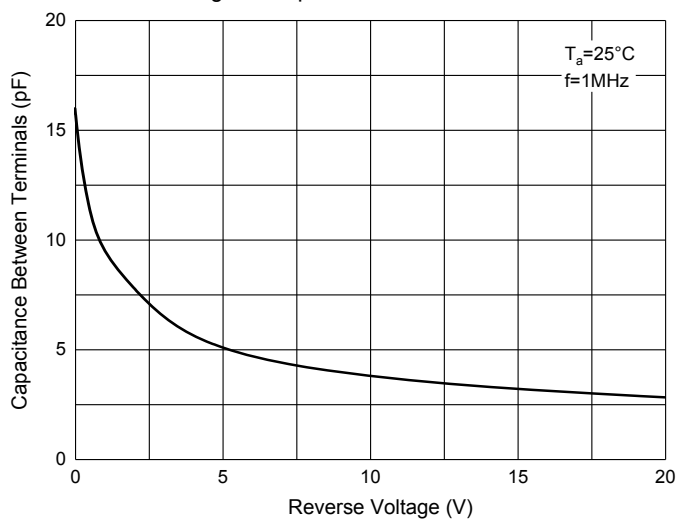
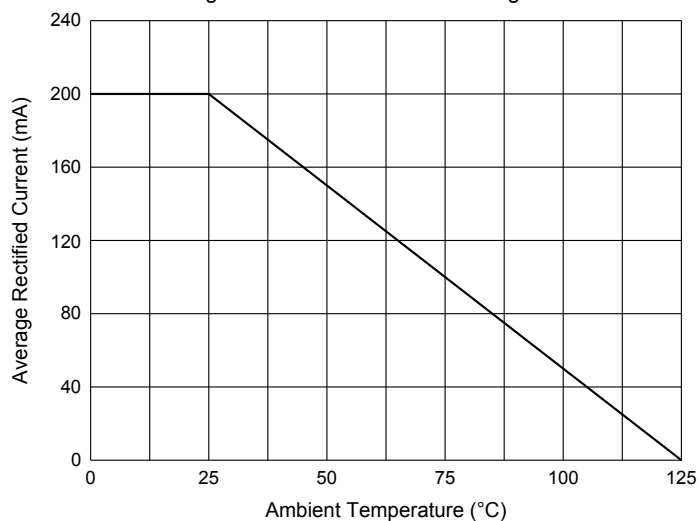


Fig. 4 - Forward Current Derating Curve



## Ordering Information

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

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