

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 BAT42WS BAT43WS	V_F	1.0V(Max) 0.40V(Max) 0.65V(Max) 0.26V(Min) 0.33V(Max) 0.45V(Max)	$I_F=200mA$; $I_F=10mA$; $I_F=50mA$; $I_F=2.0mA$; $I_F=15mA$;
Maximum Peak Reverse Current	I_{RM}	500nA(Max) 100μA(Max)	$V_R=25V$ $V_R=25V$ $T_J=100^\circ C$
Junction Capacitance	C_J	10pF(Max)	$V_R=1V$, $f=1.0MHz$
Reverse Recovery Time	t_{rr}	5ns(Max)	$I_F=I_R=10mA$ $I_{rr}=0.1 I_R$ $R_L=100\Omega$

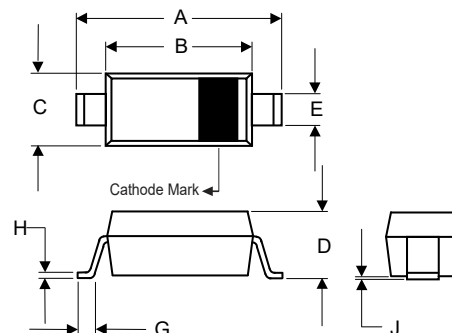
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

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

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

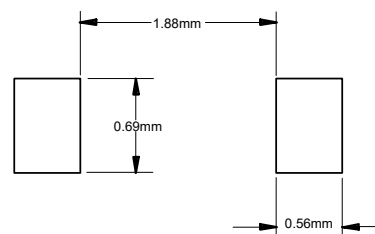
Schottky Barrier Diode 200mW

SOD-323



DIMENSIONS					
DIM	INCHES		MM		NOTE
	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

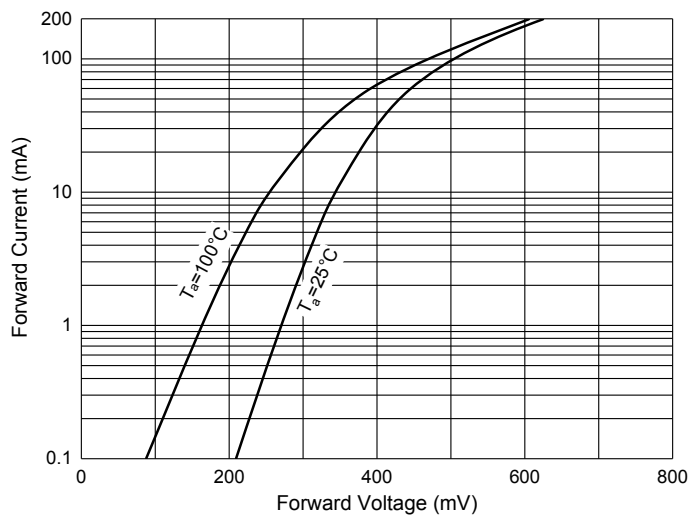


Fig. 2 - Reverse Characteristics

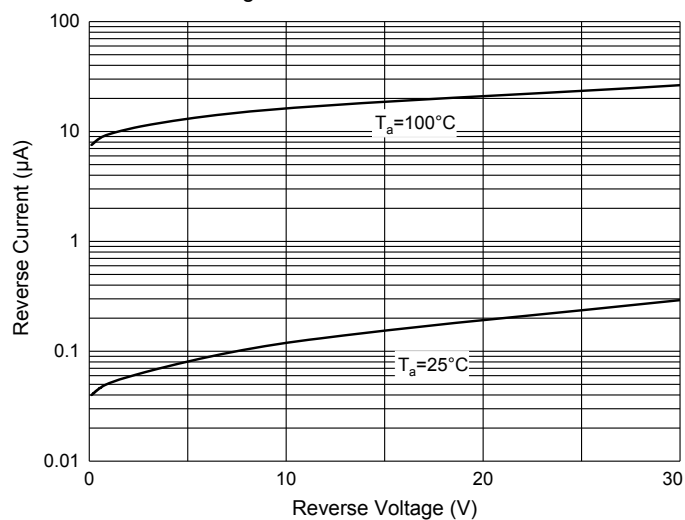


Fig. 3 - Capacitance Characteristics

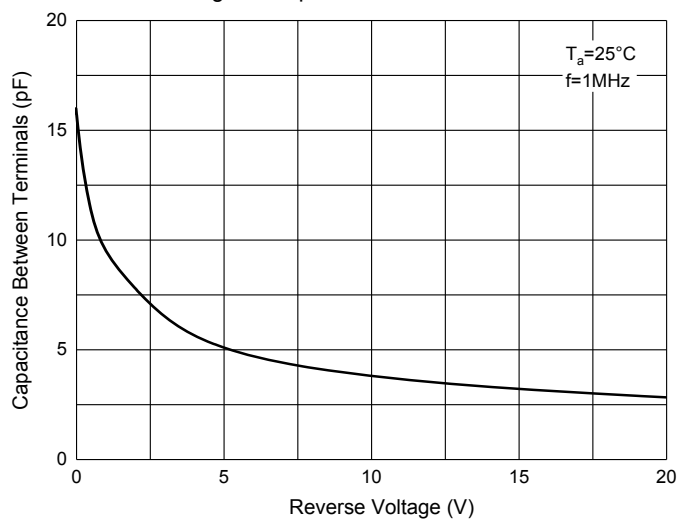
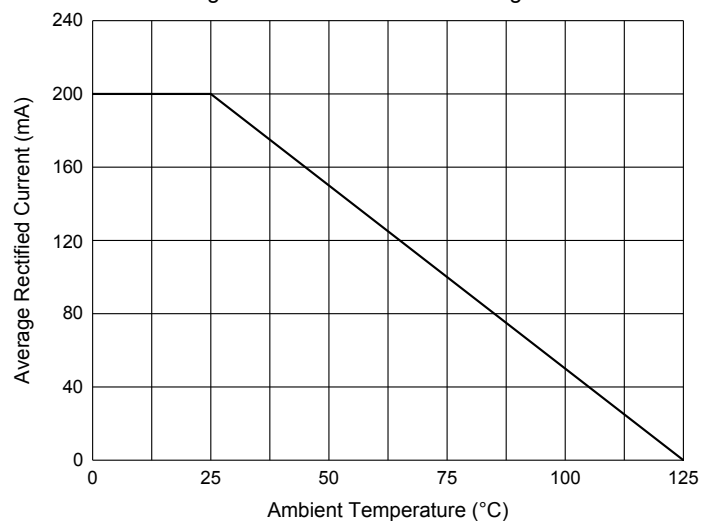


Fig. 4 - Forward Current Derating Curve



Ordering Information

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

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