

Features

- Halogen Free. "Green" Device (Note 1)
- High Breakdown Voltage
- Low Turn-on Voltage
- Guard Ring Construction For Transient Protection
- 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 DC Blocking Voltage
BAT46WS	S9	100V	100V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Forward Continuous Current	I_F	150mA	
Repetitive peak Forward Current(Note 2)	I_{FRM}	350mA	$t_p < 1.0s$, Duty Cycle < 50%
Non-repetitive Peak Forward surge current	I_{FSM}	750mA	$t = 8.3ms$
Power Dissipation	P_D	200mW	
Forward Voltage Drop(Note3)	V_F	0.25V(Max) 0.45V(Max) 1.0V(Max)	$I_F=0.1mA$; $I_F=10mA$; $I_F=250mA$;
Reverse Voltage Leakage current	I_R	0.3 μA (Max) 0.5 μA (Max) 1.0 μA (Max) 2.0 μA (Max)	$V_R=1.5V$ $V_R=10V$ $V_R=50V$ $V_R=75V$
Reverse Breakdown Voltage(Note 3)	V_R	100V(Min)	$I_R=100\mu A$
Diode Capacitance	C_T	20pF(Typ) 12pF(Typ)	$V_R=0V, f=1.0MHz$ $V_R=1V, f=1.0MHz$

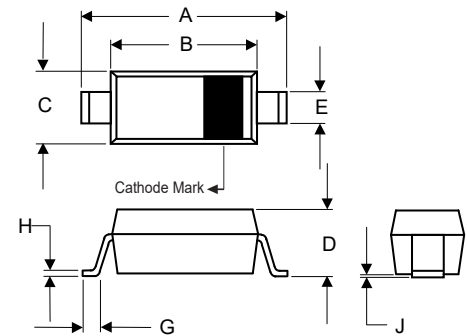
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

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

Note: 3. Short duration pulse test used to minimize self-heating effect.

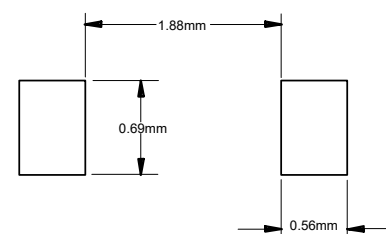
Schottky Barrier Diode 200mW

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

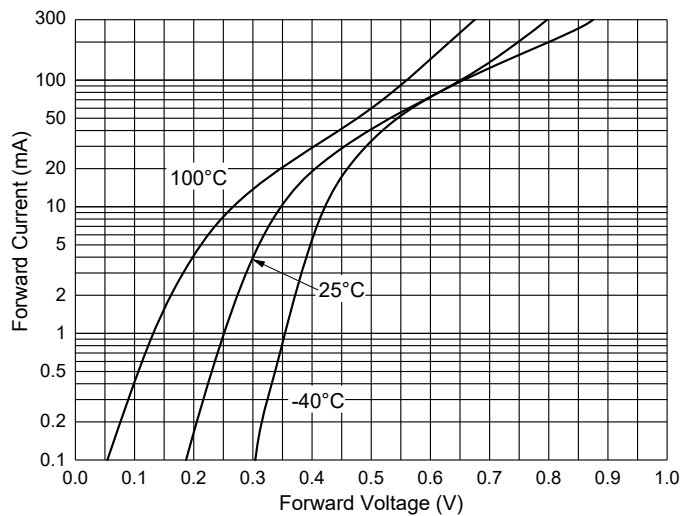


Fig. 2 - Reverse Characteristics

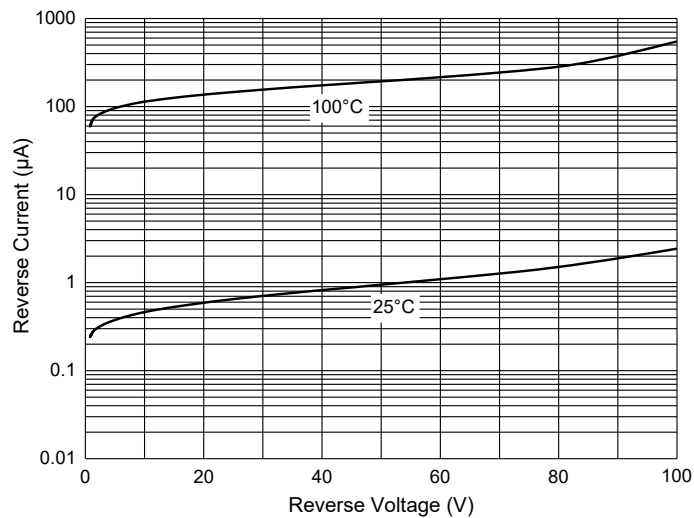


Fig. 3 - Capacitance Characteristics

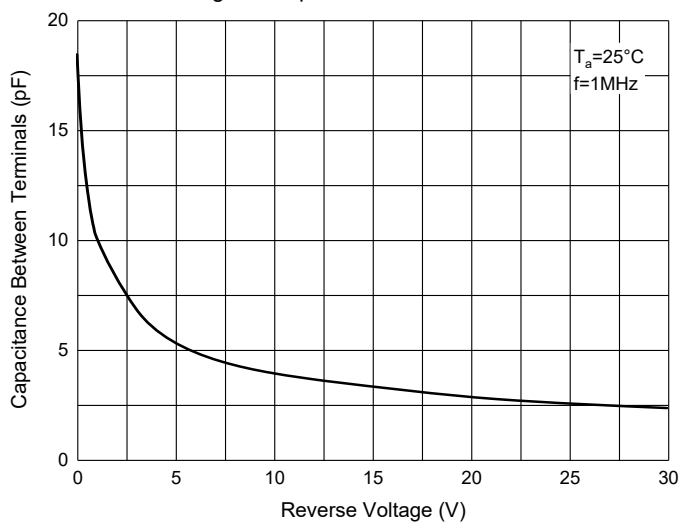
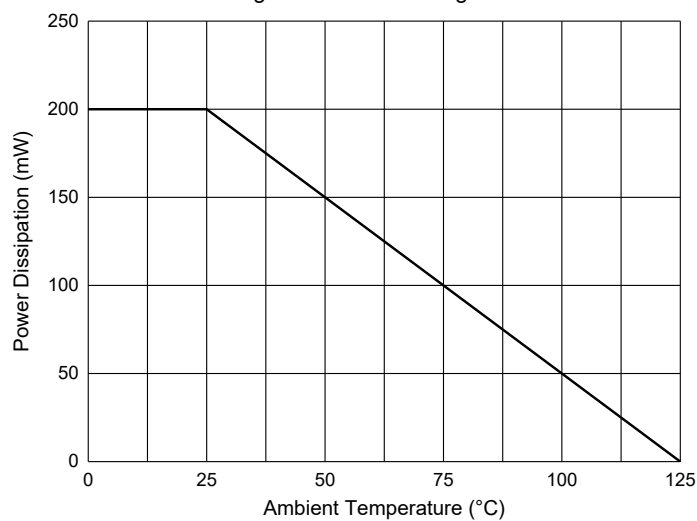


Fig. 4 - Power Derating Curve



Ordering Information

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

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