

# BAT42WS BAT43WS

## Schottky Barrier Diode 200mW

### Features

- Halogen free available upon request by adding suffix "-HF"
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- Low Forward Voltage Drop.

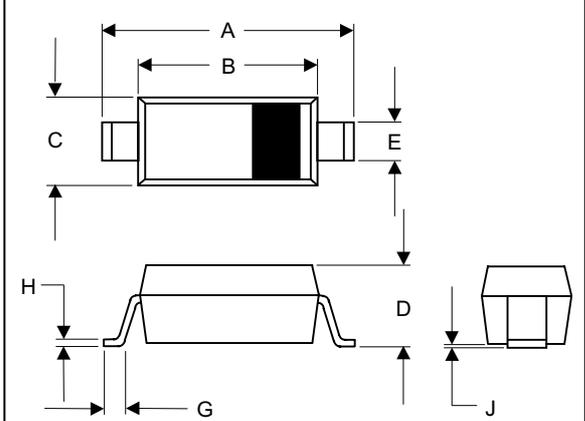
### Mechanical Data

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Polarity: Indicated by Cathode Band
- Marking: BAT42WS S7  
BAT43WS S8
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

### Maximum Ratings @ 25°C Unless Otherwise Specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$		
Working Peak Reverse Voltage	$V_{RWM}$	30	V
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Forward Continuous Current(Note1)	$I_{FM}$	200	mA
Average Rectified Output Current	$I_o$	100	mA
Repetitive Peak Forward Surge Current @ $t < 1.0s$	$I_{FRM}$	500	mA
Non-Rep. Peak Forward Surge Current @ $t < 10ms$	$I_{FSM}$	4	A
Power Dissipation	$P_d$	200	mW
Thermal Resistance(Note 1)	R	625	K/W
Operation/Storage Temp. Range	$T_j, T_{STG}$	-55 to +125	°C

### SOD323

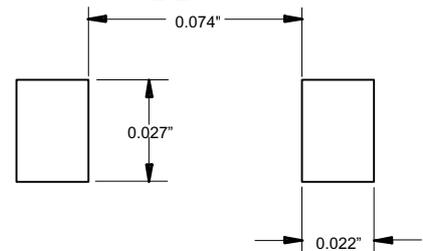


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.090	.107	2.30	2.70	
B	.063	.071	1.60	1.80	
C	.045	.053	1.15	1.35	
D	.031	.045	0.80	1.15	
E	.010	.016	0.25	0.40	
G	.004	.018	0.10	0.45	
H	.004	.010	0.10	0.25	
J	-----	.006	-----	0.15	

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

Charateristic	Symbol	Min	Max	Unit	Test Cond.
Forward Voltage Drop(Note2)	$V_{FM}$	-----	1.0	V	$I_F=200mA$
All Types		-----	0.40		$I_F=10mA$
BAT42WS		-----	0.65		$I_F=50mA$
BAT43WS		0.26	0.33		$I_F=2.0mA$
BAT43WS		-----	0.45		$I_F=15mA$
Maximum Peak Reverse Current	$I_{RM}$	-----	500	nA	$V_R=25V$
			100	µA	$V_R=25V T_j=100^\circ C$
Junction Capacitance	$C_j$	-----	10	pF	$V_R=1V, f=1.0MHz$
Reverse Recovery Time	$t_{rr}$	-----	5	ns	$I_F=I_R=10mA$ $I_{rr}=0.1I_R$ $R_L=100\Omega$

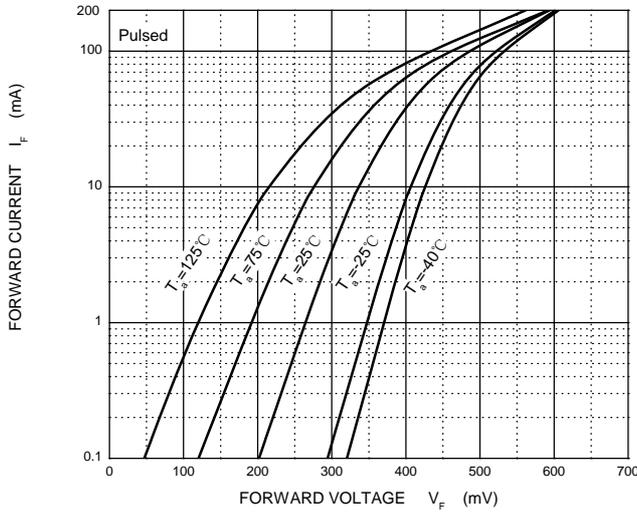
### SUGGESTED SOLDER PAD LAYOUT



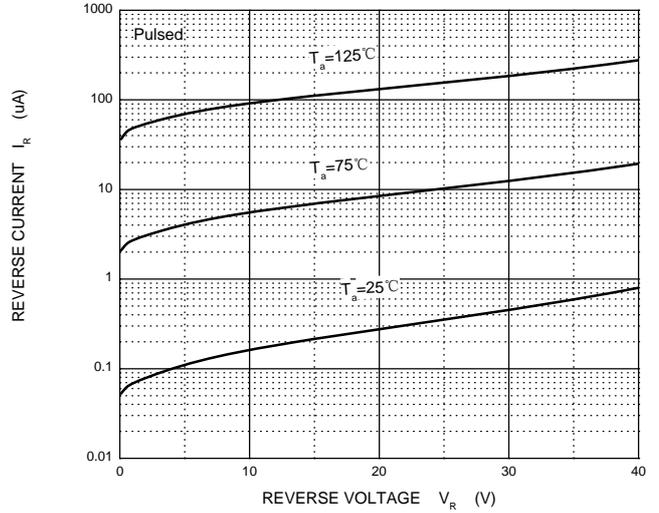
Notes: 1. Valid provided that terminals are kept at ambient temperature  
 2.  $t_c < 300\mu s$ , duty cycle  $\leq 2\%$

# RATINGS AND CHARACTERISTIC CURVES

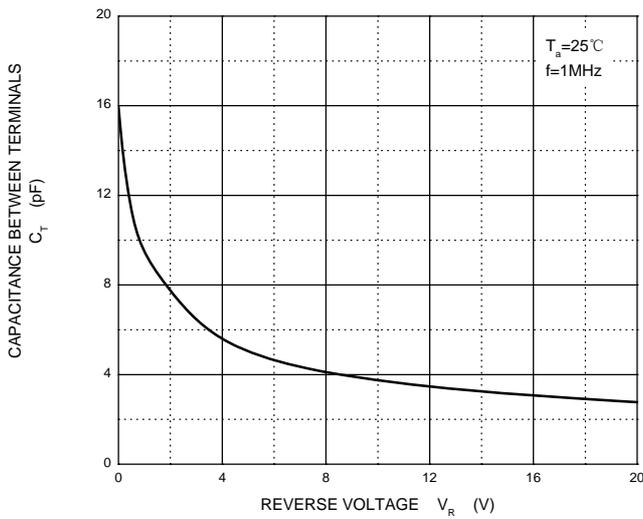
**Forward Characteristics**



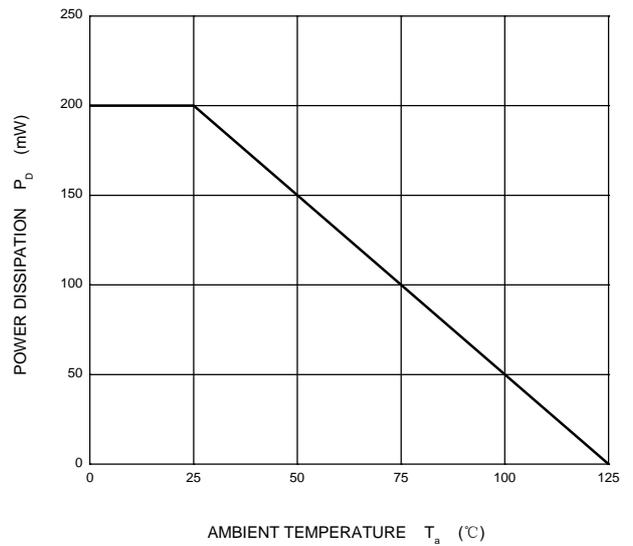
**Reverse Characteristics**



**Capacitance Characteristics**



**Power Derating Curve**





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### Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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