

BAT42W THRU BAT43W

200mW Schottky Diodes 30 Volts

Features

- Halogen free available upon request by adding suffix "-HF"
- 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)

Mechanical Data

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking code: BAT42W=S7 ,L2
BAT43W=S8 ,L3

Maximum Ratings

Symbol	Rating	Rating	Unit
V_{RRM}	Repetitive Peak Reverse Voltage	30	V
I_F	Forward DC Current at $T_{amb}=25^{\circ}C$	200	mA
I_{FRM}	Repetitive Peak Forward Current at $t_p<1s$, $T_{amb}=25^{\circ}C^{(1)}$	500	mA
I_{FSM}	Surge Forward Current at $t_p<10ms$, $T_j=25^{\circ}C^{(1)}$	4.0	A
P_{tot}	Power Dissipation at $T_{amb}=65^{\circ}C^{(1)}$	200	mW
R_{JA}	Thermal Resistance Junction to Ambient Air ⁽¹⁾	300	$^{\circ}C/W$
T_j	Junction Temperature	-55 to +125	$^{\circ}C$
T_{STG}	Storage Temperature	-55 to +150	$^{\circ}C$

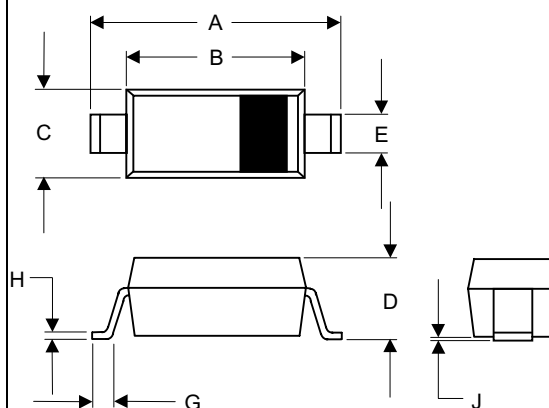
Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
$V_{(BR)R}$	Reverse Breakdown Voltage ($I_R=100\mu A$ Pulsed)	30	---	---	V
V_F	Forward Voltage ⁽²⁾ $I_F=200mA$ $I_F=10mA$ BAT42W $I_F=50mA$ BAT42W $I_F=2.0mA$ BAT43W $I_F=15mA$ BAT43W	---	---	1.0 0.4 0.65 0.33 0.45	V
I_R	Leakage Current ⁽²⁾ ($V_R=25Vdc$) ($V_R=25Vdc$, $T_j=100^{\circ}C$)	---	---	0.5 100	μA
C_{tot}	Capacitance ($V_R=1.0$, $f=1.0MHz$)	---	7.0	---	pF
t_{rr}	Reverse Recovery Time ($I_F=10mA$, $I_R=10mA$) ($I_{rr}=1.0mA$, $R_f=100\Omega$)	---	---	5.0	ns

Notes:

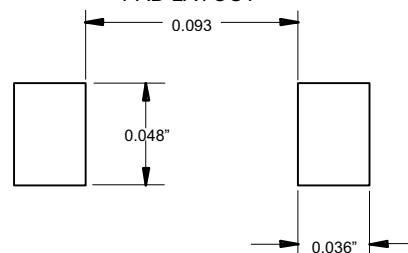
1. Valid provided that electrodes are kept at ambient temperature
2. Pulse Test $t_p<300\mu s$, Duty Cycle $<2\%$

SOD123



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.140	.152	3.55	3.85	
B	.100	.112	2.55	2.85	
C	.055	.071	1.40	1.80	
D	----	.053	----	1.35	
E	.012	.031	0.30	.78	
G	.006	----	0.15	----	
H	----	.01	----	.25	
J	----	.006	----	.15	

SUGGESTED SOLDER PAD LAYOUT



BAT42W thru BAT43W

**Fig. 1 – Admissible Power Dissipation
vs. Ambient Temperature**

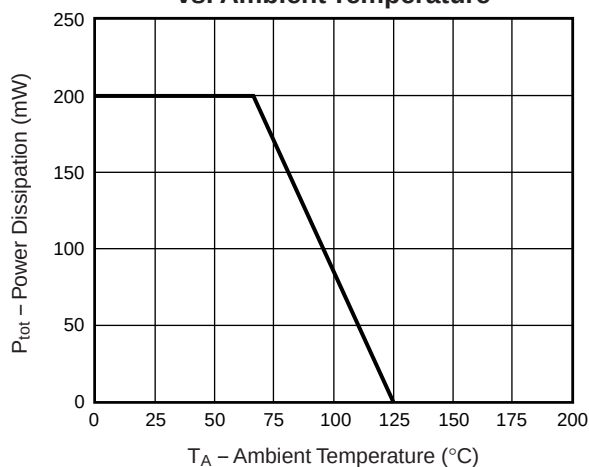
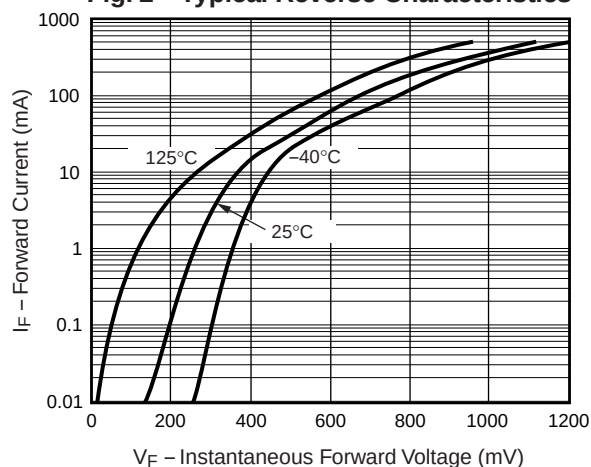
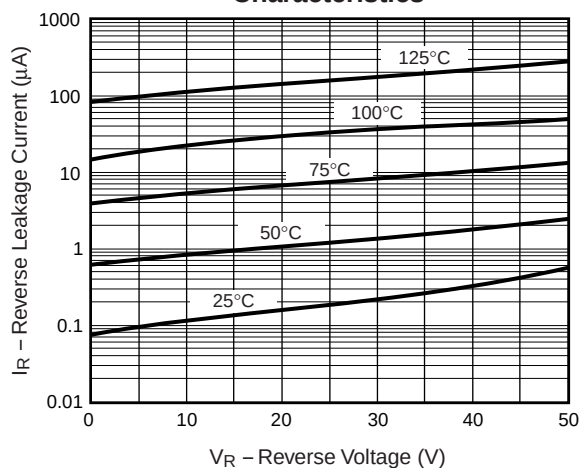


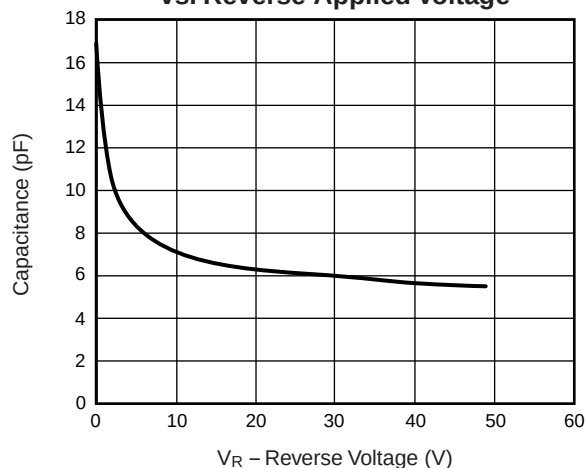
Fig. 2 – Typical Reverse Characteristics



**Fig. 3 – Typical Reverse
Characteristics**



**Fig. 4 – Typical Capacitance
vs. Reverse Applied Voltage**



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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