



FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Also Available in Lead Free Version

MARKING:

BAT42W	BAT43W



Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

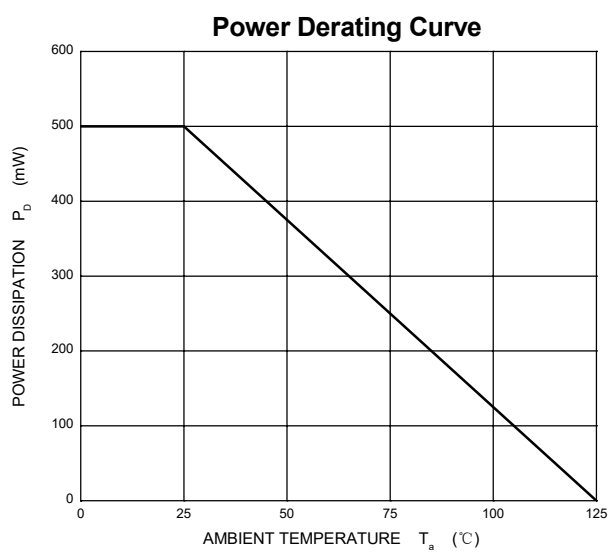
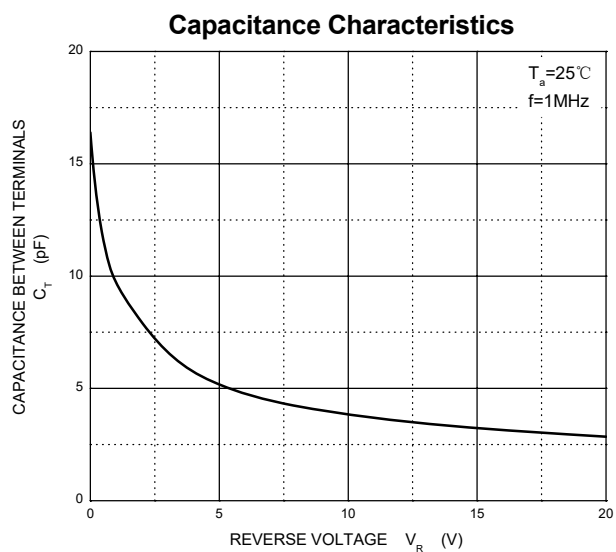
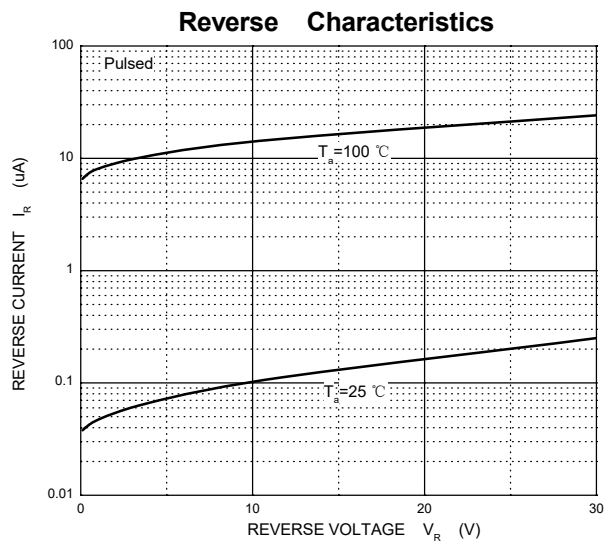
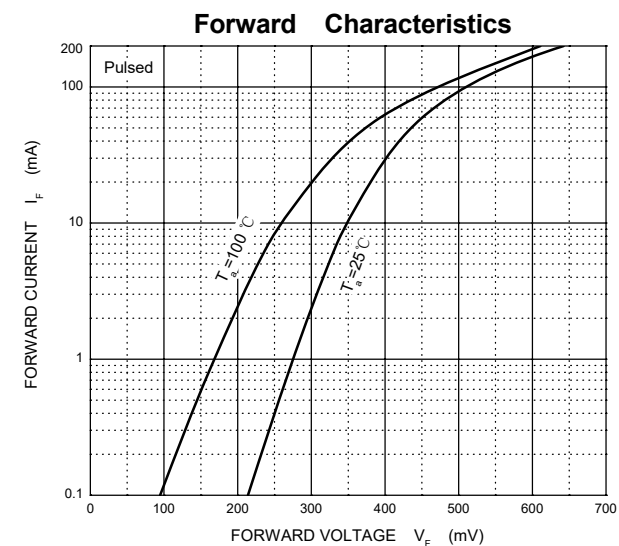
Parameter	Symbol	BAT42W/BAT43W	Unit
Peak Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Forward Continuous Current	I_{FM}	200	mA
Repetitive Peak Forward Current @t<1.0s	I_{FRM}	500	mA
Non-repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	4.0	A
Power Dissipation	P_D	500	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	200	/W
Operating Junction Temperature Range	T_J	-40 ~ +125	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	

Electrical Ratings @Ta=25°C

Parameter		Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage		V _(BR)	30			V	IR=10μA
Forward voltage	All Types	V _F			1.0	V	I _F =200mA
	BAT42W	V _F			0.4	V	I _F =10mA
		V _F			0.65	V	I _F =50mA
	BAT43W	V _F	0.26		0.33	V	I _F =2mA
		V _F			0.45	V	I _F =15mA
Reverse current		I _R			0.5	μA	V _R =25V
Capacitance between terminals		C _T			10	pF	V _R =1.0V,f=1.0MHz
Reverse recovery time		t _{rr}			5	ns	I _F =I _R =10mA I _{rr} =0.1X I _R ,R _L =100Ω

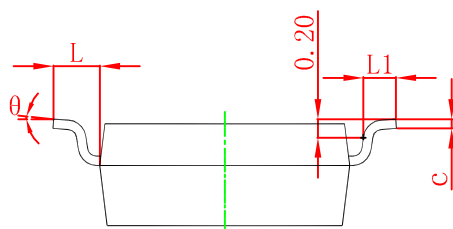
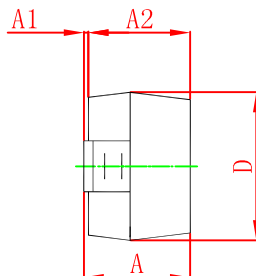
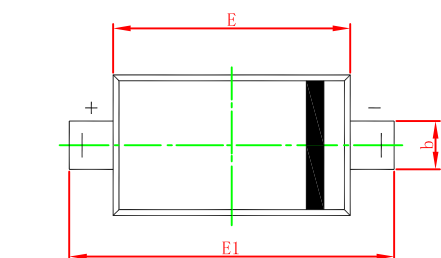


Typical Characteristics



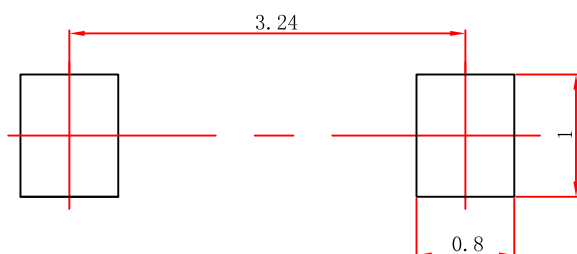


SOD-123 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

SOD-123 Suggested Pad Layout

**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.