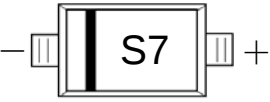
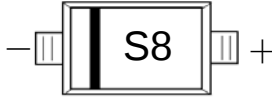


Features

- Low Forward Voltage Drop
- Fast Switching Time
- Surface Mount Package Ideally Suited for Automatic Insertion



SOD-123 top view

BAT42W	BAT43W
	
Marking: S7	Marking: S8
	



Halogen-Free

Maximum Ratings($T_a=25^\circ\text{C}$ unless otherwise noted)

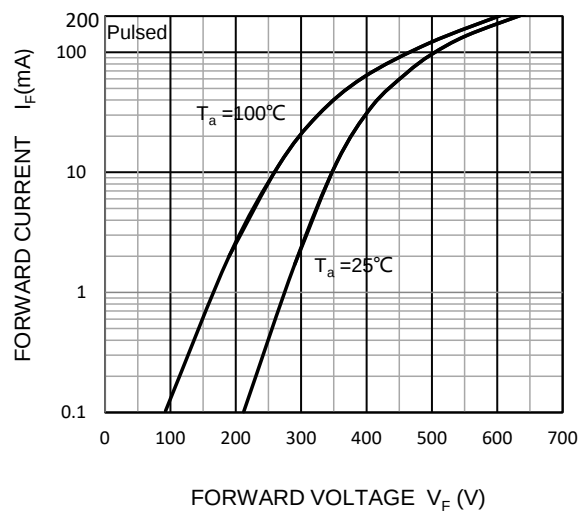
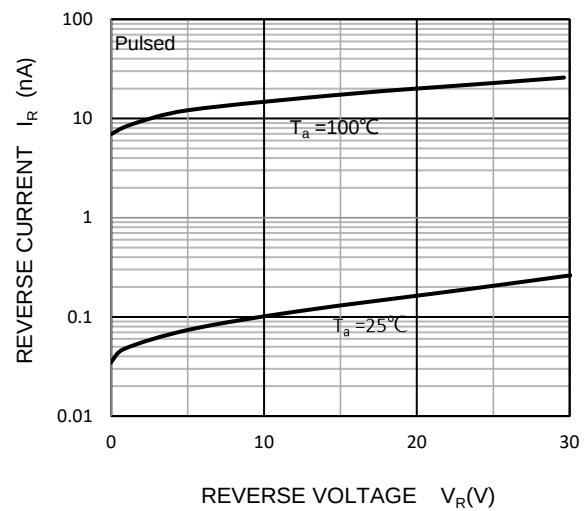
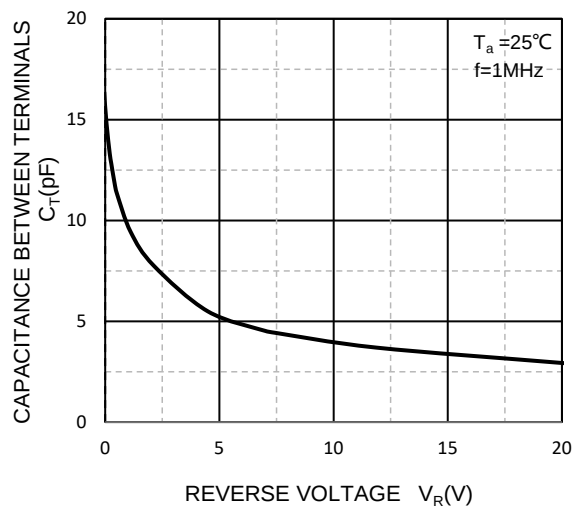
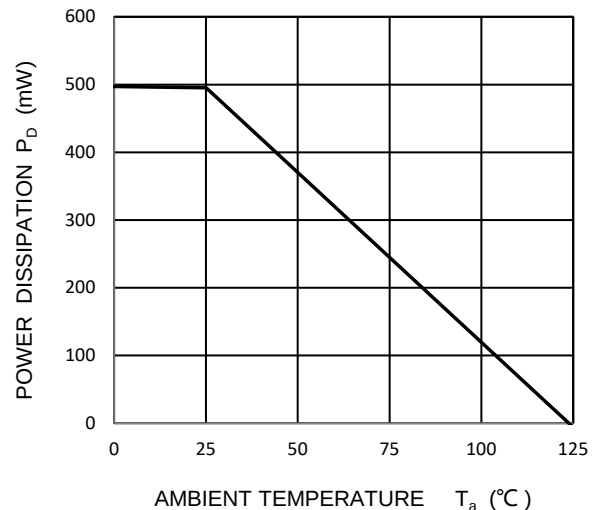
Symbol	Parameter	Value	Unit
V_R	DC Blocking Voltage	30	V
V_{RRM}	Peak Repetitive Reverse Voltage		
V_{RWM}	Working Peak Reverse Voltage		
$V_{R(RMS)}$	RMS Reverse Voltage	21	V
I_{FM}	Forward Continuous Current	200	mA
I_{FRM}	Repetitive peak forward current (Note 1) @ $t < 1.0\text{s}$	500	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current @ $t = 8.3\text{ms}$	4.0	A
P_D	Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	200	$^\circ\text{C/W}$
T_J	Operating Junction Temperature Range	-40 ~ +125	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55 ~ +150	$^\circ\text{C}$

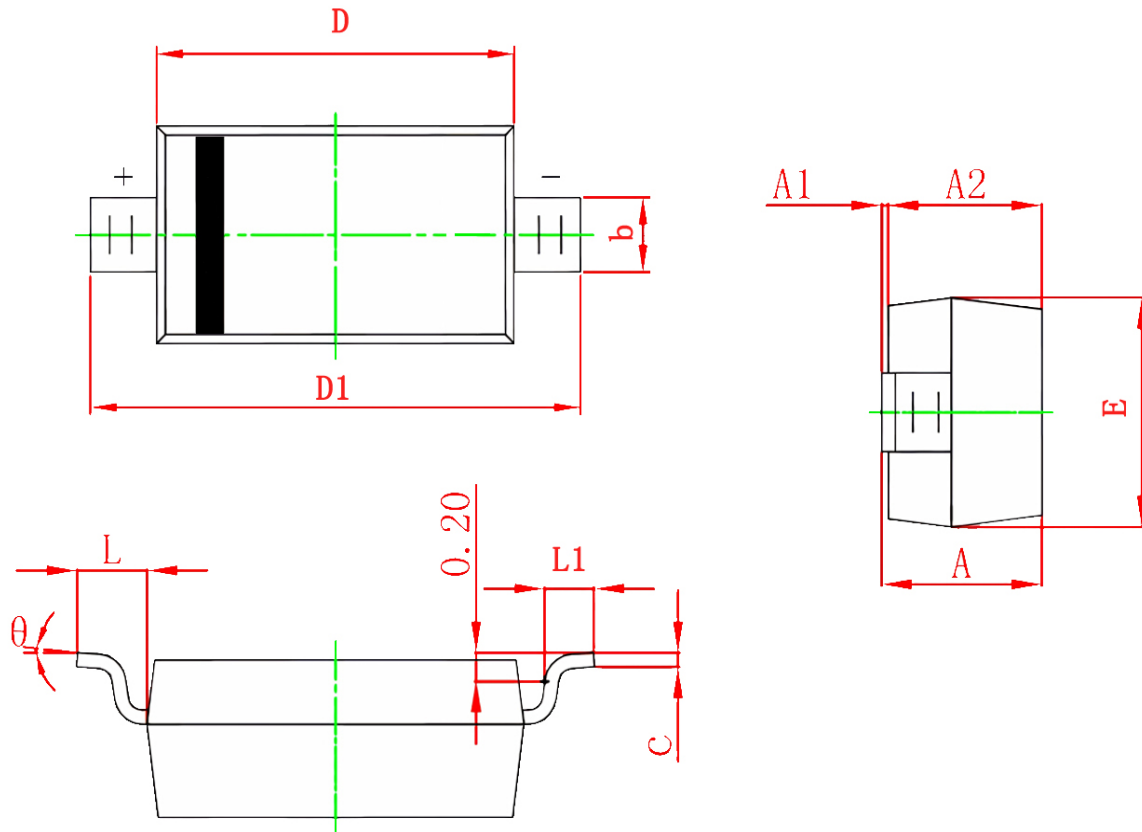
ELECTRICAL CHARACTERISTICS($T_a=25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse voltage	$I_R=10\mu\text{A}$	30	--	--	V
I_R	Reverse voltage leakage current	$V_R=25\text{V}$	--	--	0.5	μA
V_F	Forward voltage	All Types	--	--	1.0	V
V_F		BAT42W	--	--	0.4	
V_F		BAT42W	--	--	0.65	
V_F		BAT43W	0.26	--	0.33	
V_F		BAT43W	--	--	0.45	
C_{tot}	Diode capacitance	$V_R=1.0\text{V}, f=1.0\text{MHz}$	--	--	10	pF
t_{rr}	Reverse recovery time	$I_F=I_R=10\text{mA}, I_{rr}=0.1I_R, R_L=100\Omega$	--	--	5	ns

Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BAT42W	SOD-123	S7	3,000	45,000	180,000	7"reel
BAT43W	SOD-123	S8	3,000	45,000	180,000	7"reel

Typical Characteristics
Forward Characteristics

Reverse Characteristics

Capacitance Characteristics

Power Derating Curve


SOD-123 Package information


Symbol	Dimensions in Millimeters(mm)		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	2.600	2.800	0.102	0.110
D1	3.550	3.850	0.140	0.152
E	1.500	1.700	0.059	0.067
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°