

Schottky Barrier Diodes

FEATURES

- ◆For surface mounted applications
- ◆Low Forward Voltage Drop
- ◆Fast Switching
- ◆Small Surface Mount Package
- ◆PN Junction Guard Ring for Transient and ESD Protection
- ◆Available in Lead Free Version

Pinning

1.Cathode	2.Anode
	
SOD-123	

Marking Code

BAT54W-S1	S1
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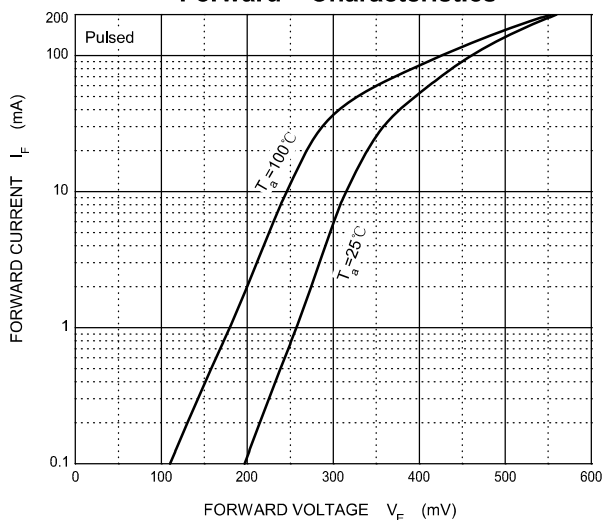
Absolute Maximum Ratings Ta = 25 °C

Parameter	Symbols	Value	Units
DC blocking voltage RMS reverse voltage	V_R $V_{R(RMS)}$	30 21	V
Average rectified output current	V_{RMS}	100	mA
Forward continuous current	I_F	200	mA
Repetitive peak forward current	I_{FRM}	300	mA
Non-repetitive Peak Forward Surge Current @t=8.3mS	I_{FSM}	600	mA
Power Dissipation	P_d	500	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	200	°C/W
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	-55~+150	°C

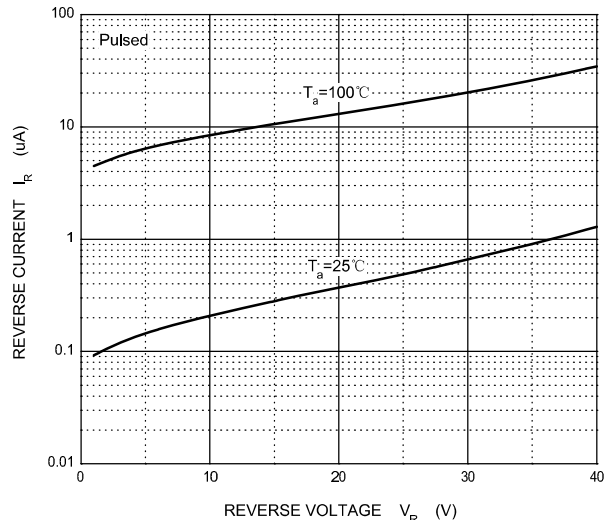
Electrical Characteristics Ta = 25 °C

Parameter	Symbols	Conditions	Min	Typ	Max	Units
Reverse breakdown voltage	$V_{(BR)}$	$I_R=100\mu A$	30	-	-	V
Forward voltage	V_{F1}	$I_F=0.1mA$	-	-	240	mV
	V_{F2}	$I_F=1.0mA$	-	-	320	
	V_{F3}	$I_F=10mA$	-	-	400	
	V_{F4}	$I_F=30mA$	-	-	500	
	V_{F5}	$I_F=100mA$	-	-	1000	
Reverse current	I_R	$V_R=25V$	-	-	2.0	uA
Reverse recovery time	T_{rr}	$I_F=10mA, I_R=10mA$ to 1mA , $R_L=100\Omega$	-	-	5.0	nS
Capacitance between terminals	C_T	$V_R=1V, f=1MHz$	-	-	10	pF

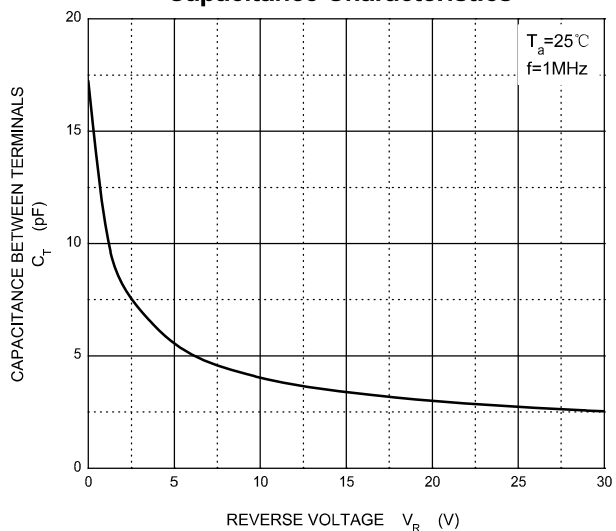
Forward Characteristics



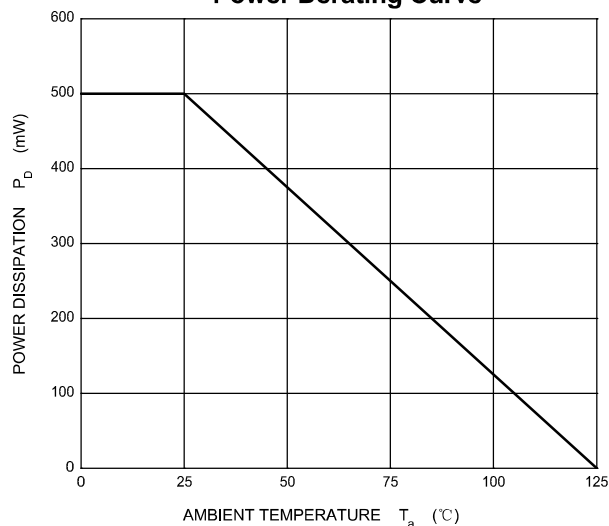
Reverse Characteristics



Capacitance Characteristics



Power Derating Curve



Ordering information

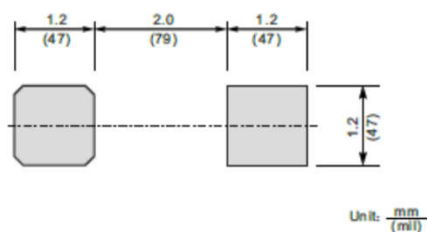
Package	Packing Description	Packing Quantity
SOD-123	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

Package Dimensions

SOD-123

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.3	35	51
C	0.09	0.22	3.5	8.7
D	1.5	1.8	59	71
E	2.5	2.8	98	110
E1	3.6	3.9	142	154
b	0.5	0.7	20	28
L1	0.25	0.45	10	18
A1	-	0.2	-	8
∠	9°			

The recommended mounting pad size



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