

SOD-123 Plastic-Encapsulate Schottky Barrier Diode

Features

- High Current Capability
- Low Forward Voltage Drop



RoHS
COMPLIANT



Mechanical Data

- SOD-123 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting Position: Any

Marking: **SOD-123**
BAT42W: S7
BAT43W: S8

Maximum Ratings & Thermal Characteristics (T_A=25°C unless otherwise noted)

Parameters	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	30	V
Maximum RMS voltage	V _{RMS}	21	V
Maximum DC blocking voltage	V _{DC}	30	V
Non-repetitive Peak Forward Current	I _{FM}	200	mA
Repetitive Peak Forward Current @t<1.0s	I _{FRM}	500	mA
Peak forward surge current 8.3 ms single half sine-wave	I _{FSM}	4.0	A
Typical thermal resistance	R _{θJA}	200	°C/W
Power Dissipation	P _D	500	mW
Junction Temperature	T _J	125	°C
storage temperature range	T _{STG}	-50-+150	°C

Valid provided that electrodes are kept at ambient temperature.

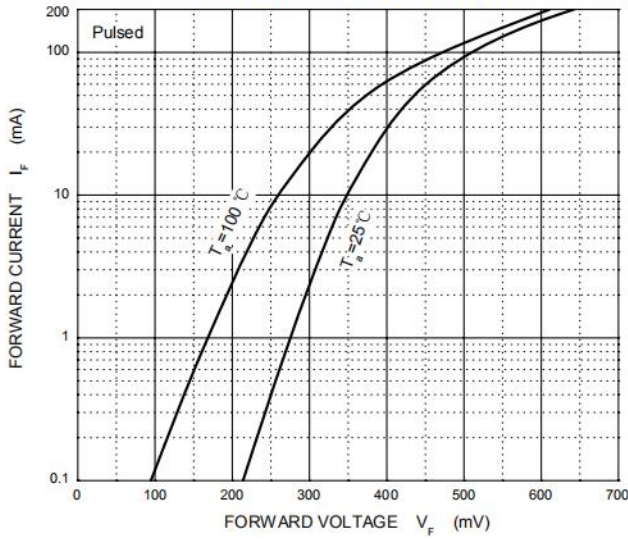
Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Maximum reverse breakdown voltage	V _R	I _R =10uA	30		V
Maximum reverse current	I _R	V _R =25V		0.5	uA
Maximum forward voltage	V _F	I _F =200mA		1.00	V
		I _F =10mA		0.40	
		I _F =50mA		0.65	
		I _F =2.0mA	0.26	0.33	
		I _F =15mA		0.45	
Reverse recovery time	T _{RR}	I _F = I _R = 10mA I _{rr} =0.1xI _R R _L =100 Ω		5	nS
Type junction capacitance	C _j	V _R =1.0V f=1MHZ		10	pF

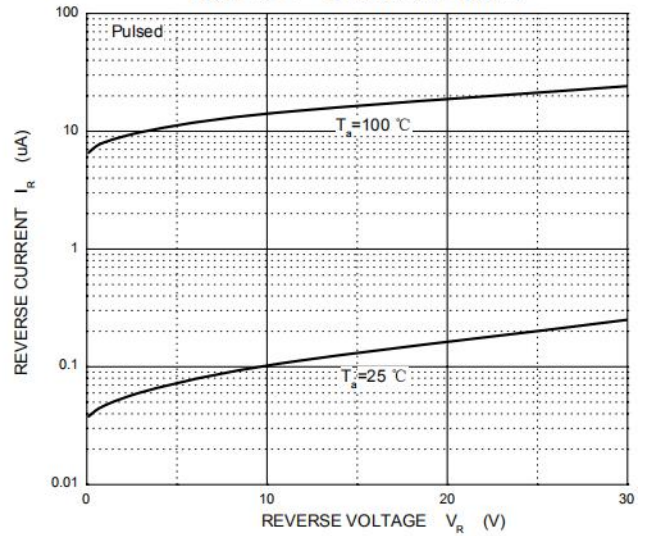
Ratings and Characteristics Curves

($T_A = 25^\circ\text{C}$ unless otherwise noted)

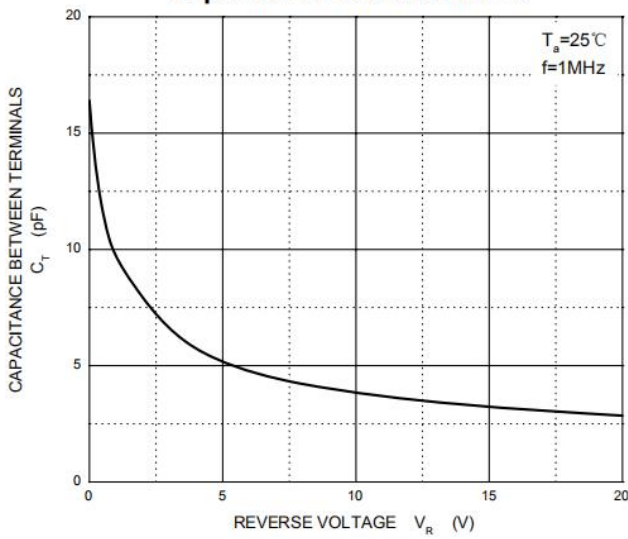
Forward Characteristics



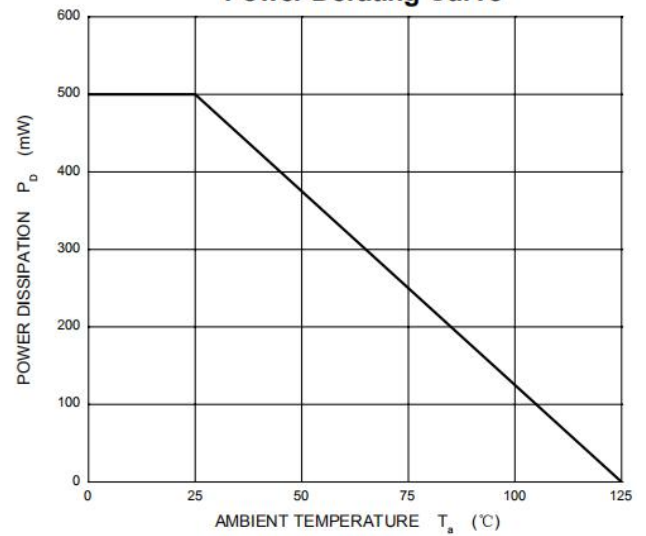
Reverse Characteristics



Capacitance Characteristics

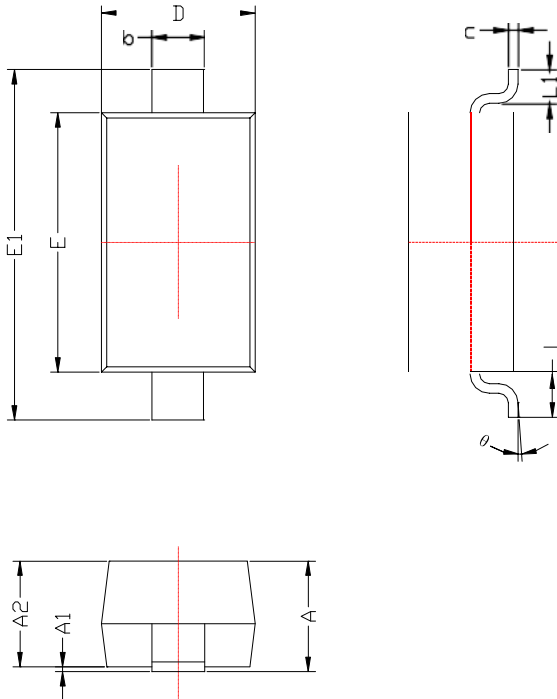


Power Derating Curve



Package Outline Dimensions

in inches (millimeters)



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.450	0.650
c	0.080	0.150
D	1.500	1.700
E	2.600	2.800
E1	3.550	3.850
L	0.500REF	
L1	0.250	0.450
θ	0°	8°

Revision History

Document Version	Date of release	Description of changes
Rev.A	2018.07.25	First issue

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