

Schottky Diode

SOD-123



RoHS
Compliant



Features:

- Low forward voltage drop
- Fast switching time
- Surface mount package ideally suited for automatic insertion

Mechanical Data

Case	: SOD-123, plastic
Terminals	: Solderable per MIL-STD-202, Method 208
Polarity	: Cathode band
Weight	: 0.01g (Approximately)

Maximum Ratings and Electrical Characteristics

Rating at 25°C Ambient Temperature Unless Otherwise Specified.

Characteristic	Symbol	Rating	Units
Repetitive Peak Reverse Voltage	V _{RRM}	30	V
Forward DC Current at T _{amb} = 25°C	I _F	200	mA
Repetitive Peak Forward Current at t _p <1s, T _{amb} = 25°C (1)	I _{FRM}	500	mA
Surge Forward Current at t _p <10ms, T _j = 25°C (1)	I _{FSM}	4	A
Power Dissipation at T _{amb} = 65°C (1)	P _{tot}	200	mW
Thermal Resistance Junction to Ambient Air (1)	R _{θJA}	300	°C/W
Operating Temperature Range	T _j	-55 to +125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

Characteristic	Symbol	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage (I _R = 101uAdc Pulsed)	V _{(BR)R}	30	-	-	V
Forward Voltage (2) I _F = 200mA DC I _F = 10mA DC I _F = 50mA DC I _F = 2mA DC I _F = 15mA DC	V _F	0.26		1 0.4 0.65 0.33 0.45	V
Leakage Current (2) (V _R = 25V DC) (V _R = 25V DC, T _J = 100°C)	I _R			0.5 100	μA
Capacitance (V _R = 1.0, f = 1.0MHz)	C _{tot}	-	7	-	pF
Reverse Recovery Time(I _F = 10mA, I _R = 10mA) (I _{rr} = 1.0mA, R _L = 100Ω)	t _{rr}	-	-	5	nS

Notes: 1. Valid Provided that Terminals are Kept at Ambient Temperature.
2. Pulse Test t_p<300μs, Duty Cycle<2%

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Fig. 1 – Admissible Power Dissipation vs. Ambient Temperature

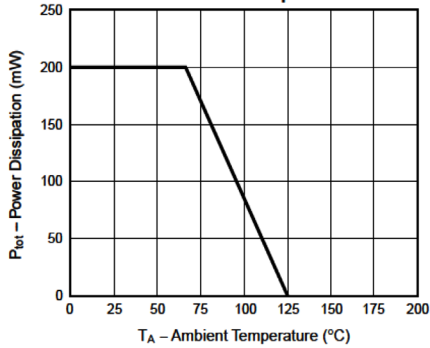


Fig. 2 – Typical Reverse Characteristics

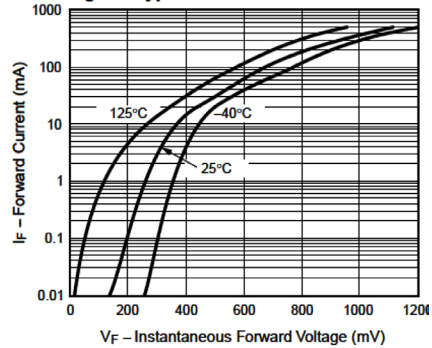


Fig. 3 – Typical Reverse Characteristics

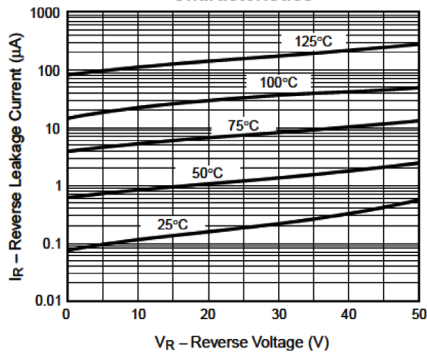
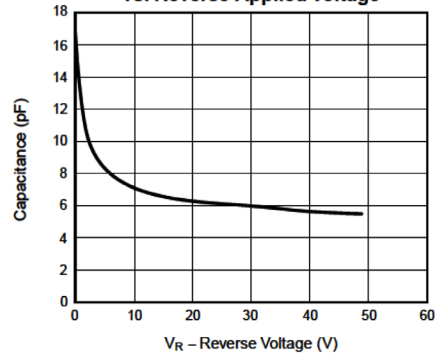
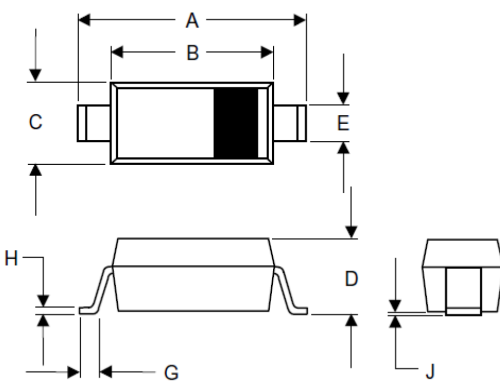


Fig. 4 – Typical Capacitance vs. Reverse Applied Voltage



Dimension:



SOD-123		
Dim.	Min.	Max.
A	3.55	3.85
B	2.55	2.85
C	1.4	1.8
D	-	1.35
E	0.3	0.78
G	0.15	-
H	-	0.25
J	-	0.15

Dimensions : Millimetres

Part Number Table

Description	Part Number
Diode, Schottky, SOD-123	BAT42W

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