



SOD-123 Plastic-Encapsulate Diode

BAT42W/BAT43W

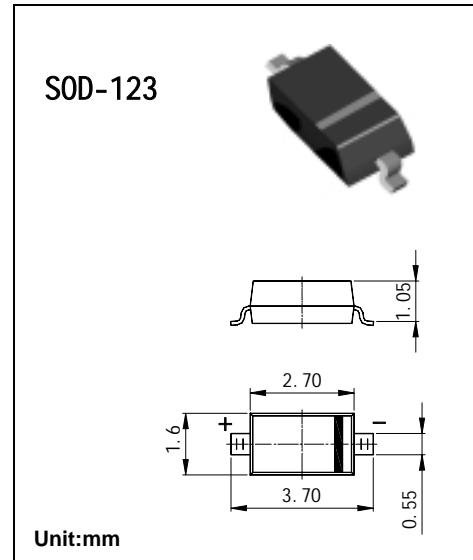
SCHOTTKY DIODE

Features

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

Marking:

BAT42W:S7
BAT43W:S8



Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	BAT42W / BAT43W	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	30	V
RMS Reverse Voltage	V _{R(RMS)}	21	V
Forward Continuous Current (Note 1)	I _{FM}	200	mA
Repetitive Peak Forward Current (Note 1) @ t < 1.0s	I _{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current @ t < 10ms	I _{FSM}	4.0	A
Power Dissipation	P _d	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R _{θJA}	625	K/W
Operating and Storage Temperature Range	T _j , T _{STG}	-55 to +125	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

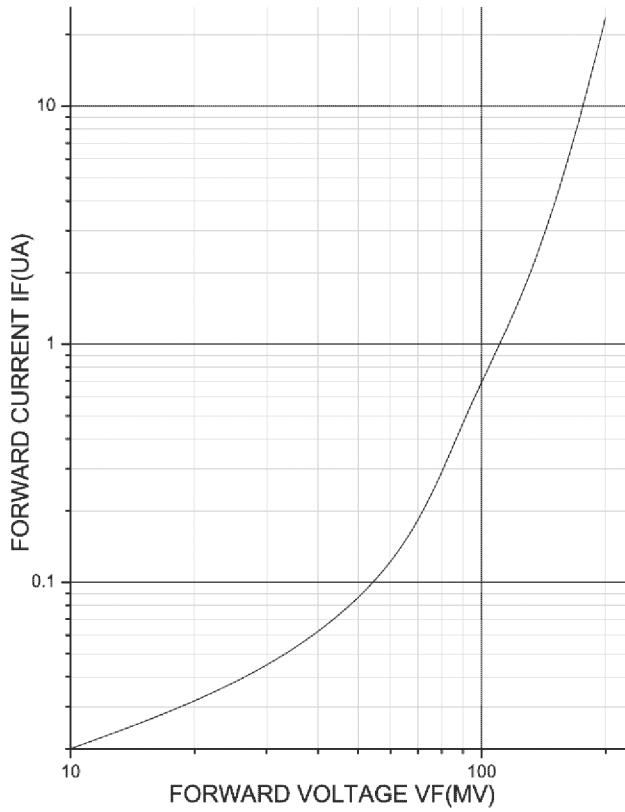
Characteristic	Symbol	Min	Max	Unit	Test Condition
Forward Voltage Drop	V _{FM}	—	1.0	V	I _F = 200mA I _F = 10mA I _F = 50mA I _F = 2.0mA I _F = 15mA
Maximum Peak Reverse Current	I _{RM}	—	500 100	nA μA	V _R = 25V V _R = 25V, T _j = 100°C
Junction Capacitance	C _j	—	10	pF	V _R = 1.0, f = 1.0MHz
Reverse Recovery Time	t _{rr}	—	5.0	ns	I _F = I _R = 10mA, I _{rr} = 0.1 x I _R , R _L = 100Ω
Rectification Efficiency	η _v	80	—	%	R _L = 15Ω, C _L = 300pF, f = 45MHz, V _{RF} = 2.0V

Notes: 1. Valid provided that terminals are kept at ambient temperature.

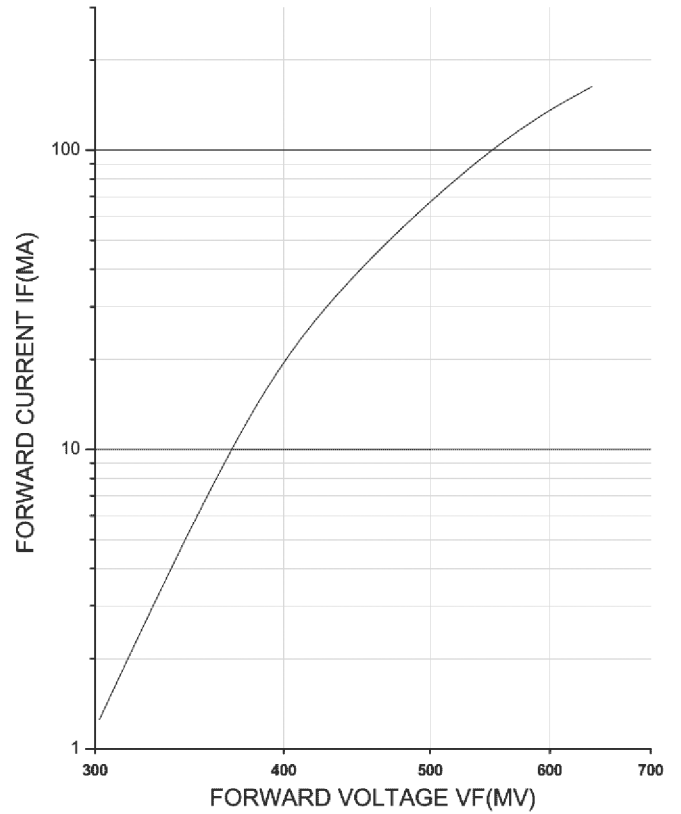
Typital Characteristics

BAT42W

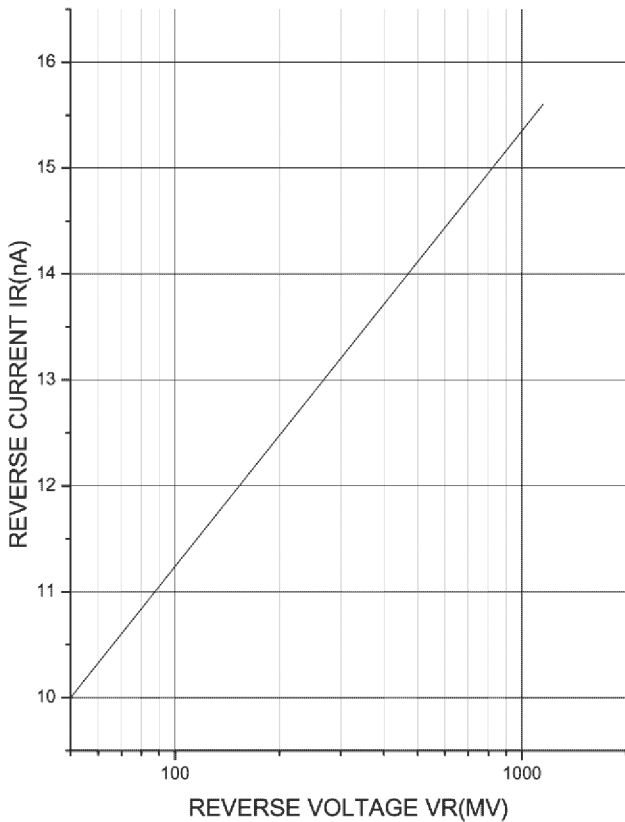
IF-VF



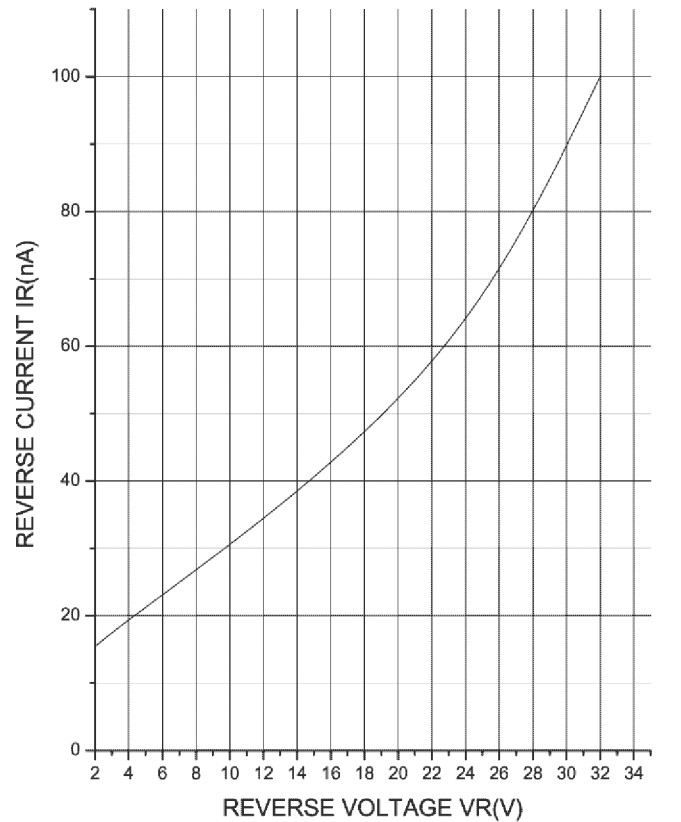
IF-VF



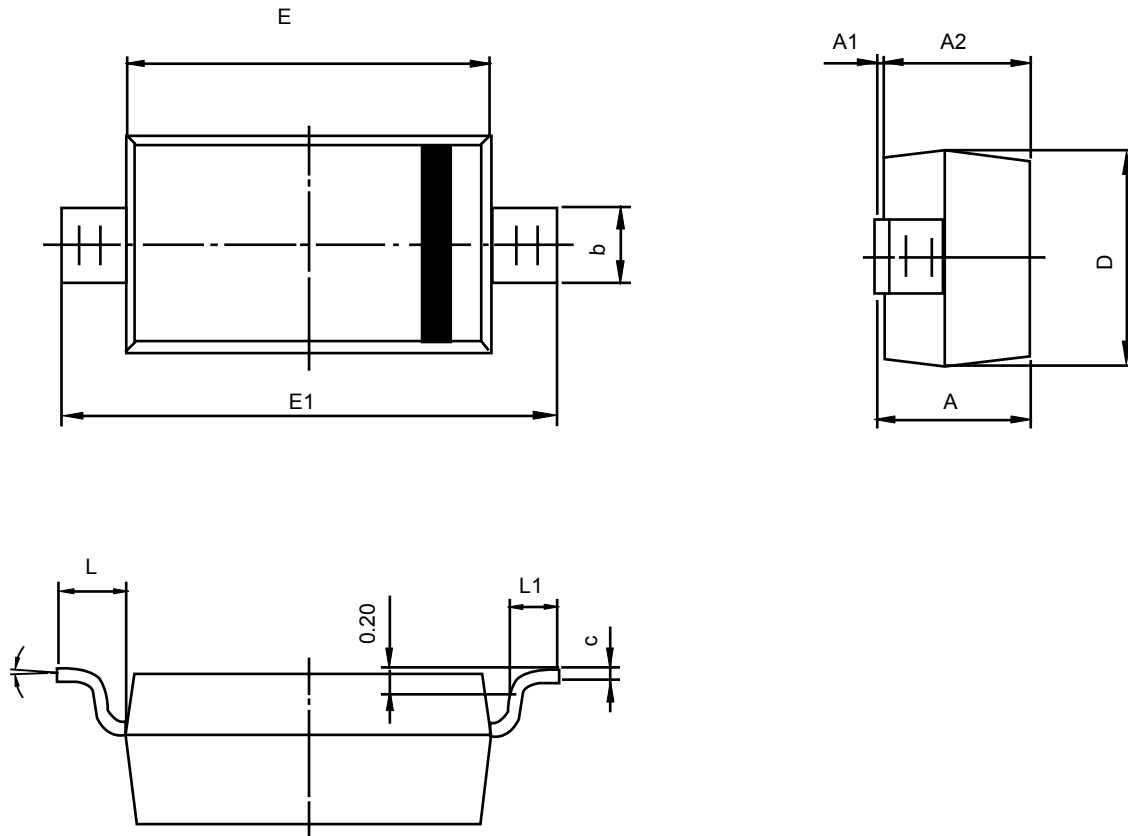
IR-VR



IR-VR



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	0.500REF		0.020REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°