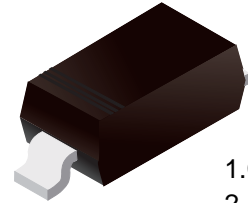


BAT42W/BAT43W

SCHOTTKY DIODE

■ Features

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



1.Cathode
2.Anode

■ Simplified outline(SOD-123)

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	VRRM	30	V
Working Peak Reverse Voltage	VRWM	30	V
DC Blocking Voltage	VR	30	V
RMS Reverse Voltage	VR(RMS)	21	V
Forward Continuous Current (Note 1)	IFM	500	mA
Repetitive Peak Forward Current (Note 1) @ t < 1.0s	IFRM	200	mA
Non-Repetitive Peak Forward Surge Current @ t < 10ms	IFSM	4	A
Power Dissipation	Pd	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	RθJA	500	°C/W
Operating and Storage Temperature Range	Tj, TSTG	-55 to + 150	°C

Note 1

1. Part mounted on FR-4 board with recommended pad layout

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Conditions	Min	Max	Unit
Reverse Breakdown Voltage (Note 2)	VR	IR = 100 μ A	30		V
Forward Voltage Drop (Note 2) BAT42W	VRM	IF = 10 mA		0.4	V
		IF = 50 mA		0.65	
Forward Voltage Drop (Note 2) BAT43W	VRM	IF = 2.0 mA	0.26	0.33	V
		IF = 15 mA		0.45	
Peak Reverse Current (Note 2)	IRM	VR = 25V		500	nA
		VR = 25 V, Tj = 100°C		100	μ A
Total Capacitance	CT	VR = 1.0 V, f = 1.0MHz		10	pF
Reverse Recovery Time	trr	IF = IR = 10 mA, Irr = 0.1 x IR, RL = 100 Ω		5.0	ns
Rectification Efficiency	ηv	RL = 15 Ω, CL = 300pF, f = 45MHz, VRF = 2.0V	80		%

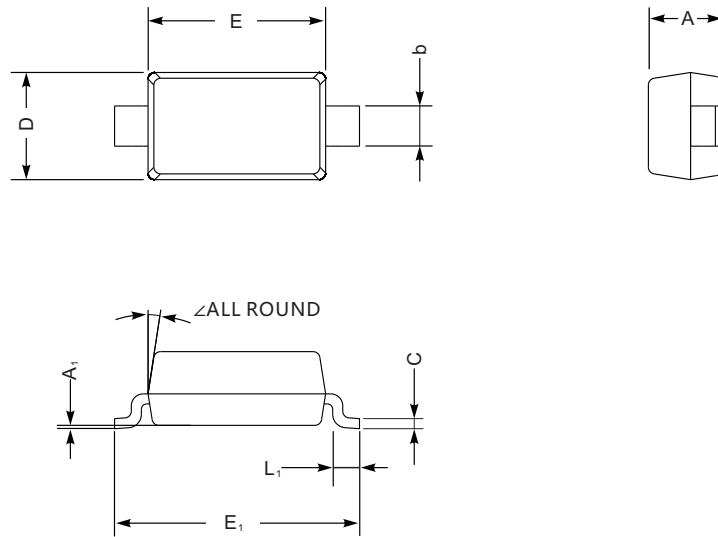
Note

- 2.Short duration pulse test used to minimize self-heating effect.

■ Marking

Type	BAT42W	BAT43W
Marking	S7	S8

■ SOD-123



SOD-123 mechanical data

UNIT		A	C	D	E	E ₁	L ₁	b	A ₁	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	

■ The recommended mounting pad size

