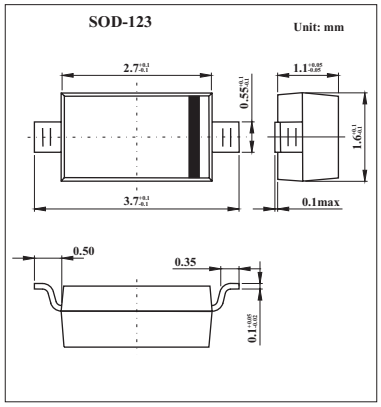
SURFACE MOUNT SCHOTTKY BARRIER DIODE

BAT42W/BAT43W



Features

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

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}	30	V
DC Blocking Voltage	V_R	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Forward Continuous Current (Note 1)	I_{FM}	500	mA
Repetitive Peak Forward Current (Note 1) @ t < 1.0s	I_{FRM}	200	mA
Non-Repetitive Peak Forward Surge Current @ t < 10ms	I_{FSM}	4	A
Power Dissipation	P_d	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	500	℃/W
Operating and Storage Temperature Range	T_j , T_{STG}	-55 to + 150	℃

Note 1

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

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Conditions	Min	Max	Unit
Reverse Breakdown Voltage (Note 2)	V_R	I_R = 100 μA	30		V
Forward Voltage Drop (Note 2) BAT42W	V_{RM}	I_F = 10 mA		0.4	V
		I_F = 50 mA		0.65	
Forward Voltage Drop (Note 2) BAT43W	V_{RM}	I_F = 2.0 mA	0.26	0.33	V
		I_F = 15 mA		0.45	
Peak Reverse Current (Note 2)	I_{RM}	V_R = 25V		500	nA
		V_R = 25 V, T_j = 100℃		100	μA
Total Capacitance	C_T	V_R = 1.0 V, f = 1.0MHz		10	pF
Reverse Recovery Time	t_{rr}	I_F = I_R = 10 mA, I_{rr} = 0.1 x I_R, R_L = 100Ω		5.0	ns
Rectification Efficiency	η_V	R_L = 15Ω, C_L = 300pF, f = 45MHz, V_{RF} = 2.0V	80		%

Note

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

■ Marking

Type	BAT42W	BAT43W
Marking	S7	S8