

II. Schottky Rectifier

0.2A Surface Mount Schottky Rectifier BAT42W / BAT43W

(Package: SOD-123)

<p>FEATURES</p> <ul style="list-style-type: none"> • Low forward voltage drop • Guard ring construction for transient protection • High conductance <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case : Molded plastic body • Terminals : Plated leads solderable per MIL-STD-750, Method 2026 • Polarity : Polarity symbols marked on case • Marking : BAT42W : S7 BAT43W : S8 	<p>Case: SOD-123 Dimensions in millimetres (inches)</p>
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MAXIMUM RATING @ Ta=25°C unless otherwise specified

Parameter	Symbol	Limits	Unit
Non-Repetitive Peak reverse voltage	V_{RM}	30	V
Working peak	V_{RWM}		
DC Reverse Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Forward continuous Current	I_F	200	mA
Repetitive peak Forward Current	I_{FRM}	500	mA
Forward Surge Current	I_{FSM}	4.0	A
Power Dissipation	P_d	200	mW
Thermal resistance, junction to ambient air	$R_{\theta JA}$	625	°C/W
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	-55 to +125	°C

Ratings of BAT42W / BAT43W

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=100\mu A$	30			V
Forward voltage ALL types BAT42W BAT42W BAT43W BAT43W	V_F	$I_F=200mA$			1.0	V
	V_F	$I_F=10mA$			0.4	V
	V_F	$I_F=50mA$			0.65	V
	V_F	$I_F=2mA$	0.26		0.33	V
	V_F	$I_F=15mA$			0.45	V
Reverse current	I_R	$V_R=25V$			0.5	μA
Reverse recovery time	t_{rr}	$I_F=I_R=10mA$ $I_{rr}=0.1 \cdot I_R$ $R_L=100\Omega$			5.0	ns
Capacitance between terminals	C_T	$V_R=1V, f=1MHz$			10	pF
Rectification efficiency	η_V	$R_L=15\Omega, C_L=300pF,$ $f=45MHz$	80			%