

SCHOTTKY DIODES

BAT42W-BAT43W

VOLTAGE RANGE
CURRENT

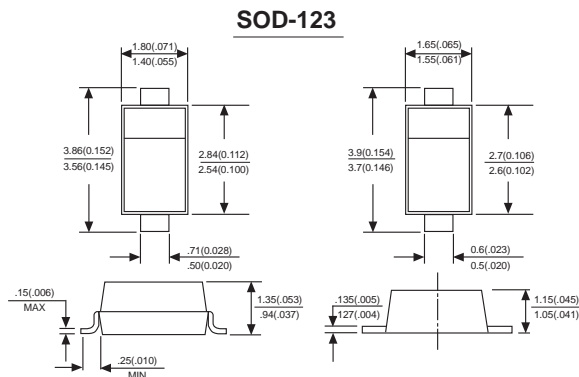
30 Volts
4.0 Ampere

FEATURES

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

MECHANICAL DATA

- 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



Dimensions in millimeters and (inches)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Maximum ratings and electrical characteristics, Single diode @ $T_A=25^\circ\text{C}$

PARAMETER	SYMBOLS	BAT42W/BAT43W	UNITS
Peak repetitive peak reverse voltage	V_{RRM}	30	VOLTS
Working peak	V_{RWM}		
DC Blocking voltage	V_R		
RMS Reverse voltage	$V_{R(RMS)}$	21	V
Forward continuous current	I_{FM}	200	mA
Repetitive peak forward current @ $t < 1.0s$	I_{FRM}	500	mA
Peak forward surge current @ $t < 10ms$	I_{FSM}	4.0	A
Power dissipation	P_d	200	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	500	K/W
Storage temperature	T_{STG}	-55 to +125	$^\circ\text{C}$

Electrical ratings @ $T_A=25^\circ\text{C}$

PARAMETER	SYMBOLS	Min.	Typ.	Max.	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)R}$	30			V	$I_R=10\mu\text{A}$
Forward voltage	All types			1.0	V	$I_F=200\text{mA}$
	BAT42W			0.4	V	$I_F=10\text{mA}$
	BAT42W			0.65	V	$I_F=50\text{mA}$
	BAT43W	0.26		0.33	V	$I_F=2\text{mA}$
BAT43W			0.45	V	$I_F=15\text{mA}$	
Reverse current	I_R			0.5	μA	$V_R=25\text{V}$
Capacitance between terminals	C_T			10	pF	$V_R=1\text{V}, f=1.0\text{MHz}$
Reverse recovery time	t_{rr}			5	ns	$I_F=I_R=10\text{mA}$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$



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FIG. 1- FORWARD CURRENT DERATING CVRVE

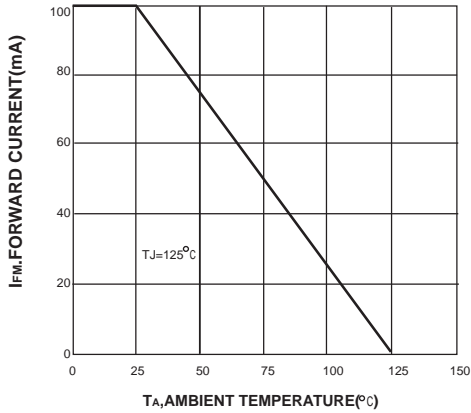


FIG. 2-TYPICAL FORWARD CHARACTERISTIC

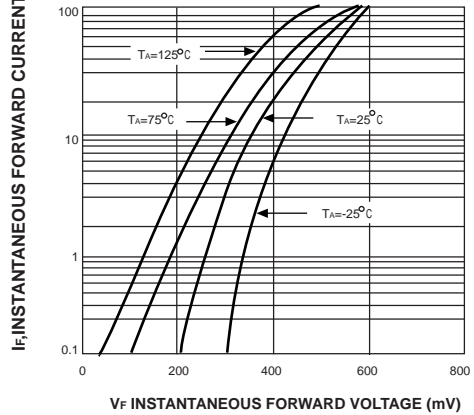


FIG. 3- TYPICAL REVERSE CHARACTERISTICS

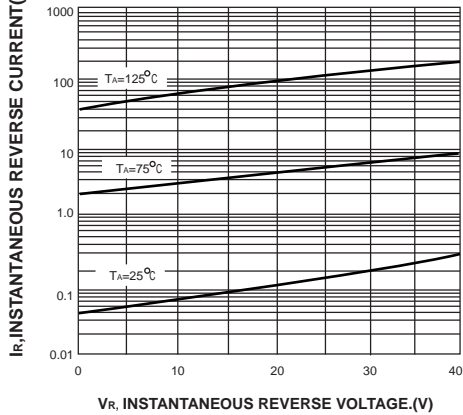


FIG. 4- TOTAL CAPACITANCE VS REVERSE VOLTAGE

