

Schottky Barrier Diode**BAT42W-BAT43W****FEATURES**

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



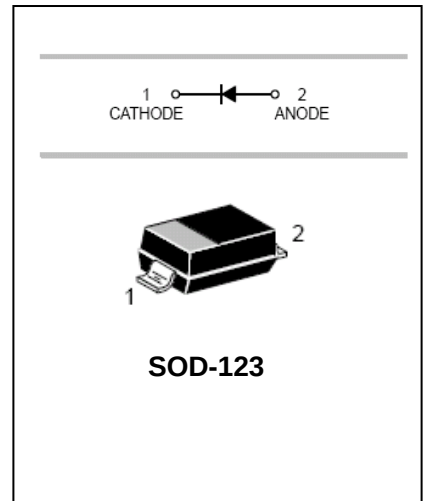
Lead-free

APPLICATIONS

- Schottky barrier detector and switching diodes.

ORDERING INFORMATION

Type No.	Marking	Package Code
BAT42W	S7	SOD-123
BAT43W	S8	SOD-123

**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	$R_{\theta JA}$	500	°C/W
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	-55-125	°C

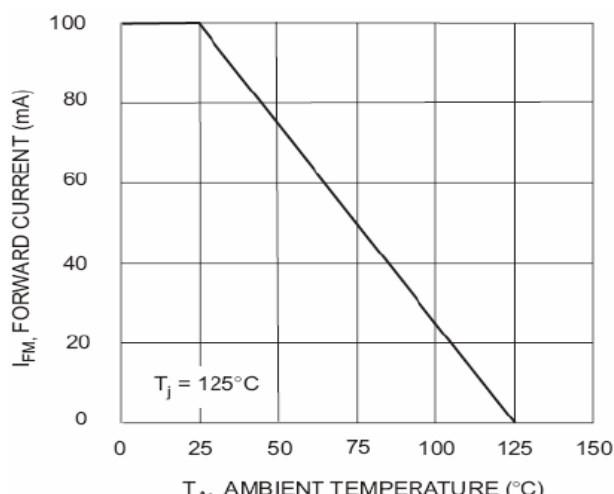
Schottky Barrier Diode

BAT42W-BAT43W

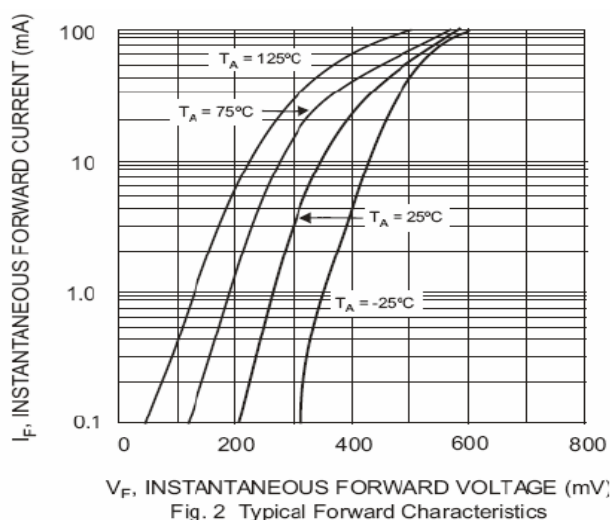
ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

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

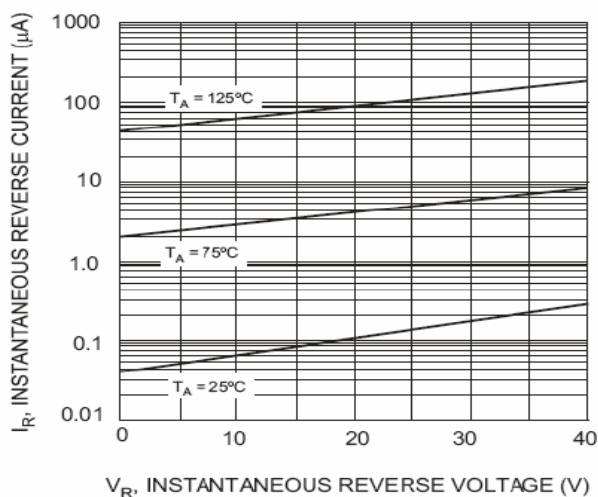
TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



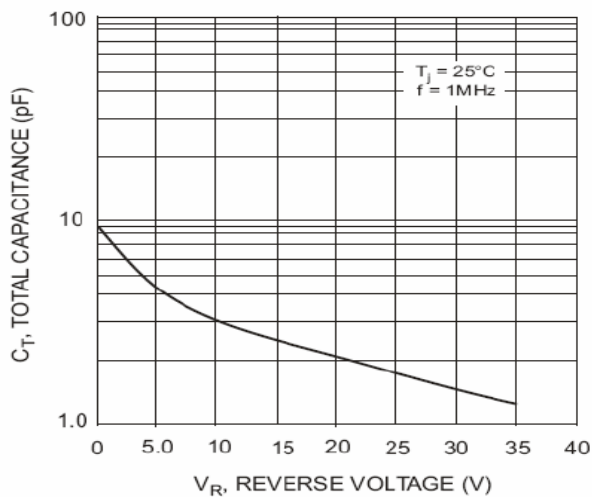
T_A , AMBIENT TEMPERATURE ($^\circ\text{C}$)
Fig. 1 Forward Current Derating Curve



V_F , INSTANTANEOUS FORWARD VOLTAGE (mV)
Fig. 2 Typical Forward Characteristics



V_R , INSTANTANEOUS REVERSE VOLTAGE (V)
Fig. 3 Typical Reverse Characteristics



V_R , REVERSE VOLTAGE (V)
Fig. 4 Total Capacitance vs. Reverse Voltage

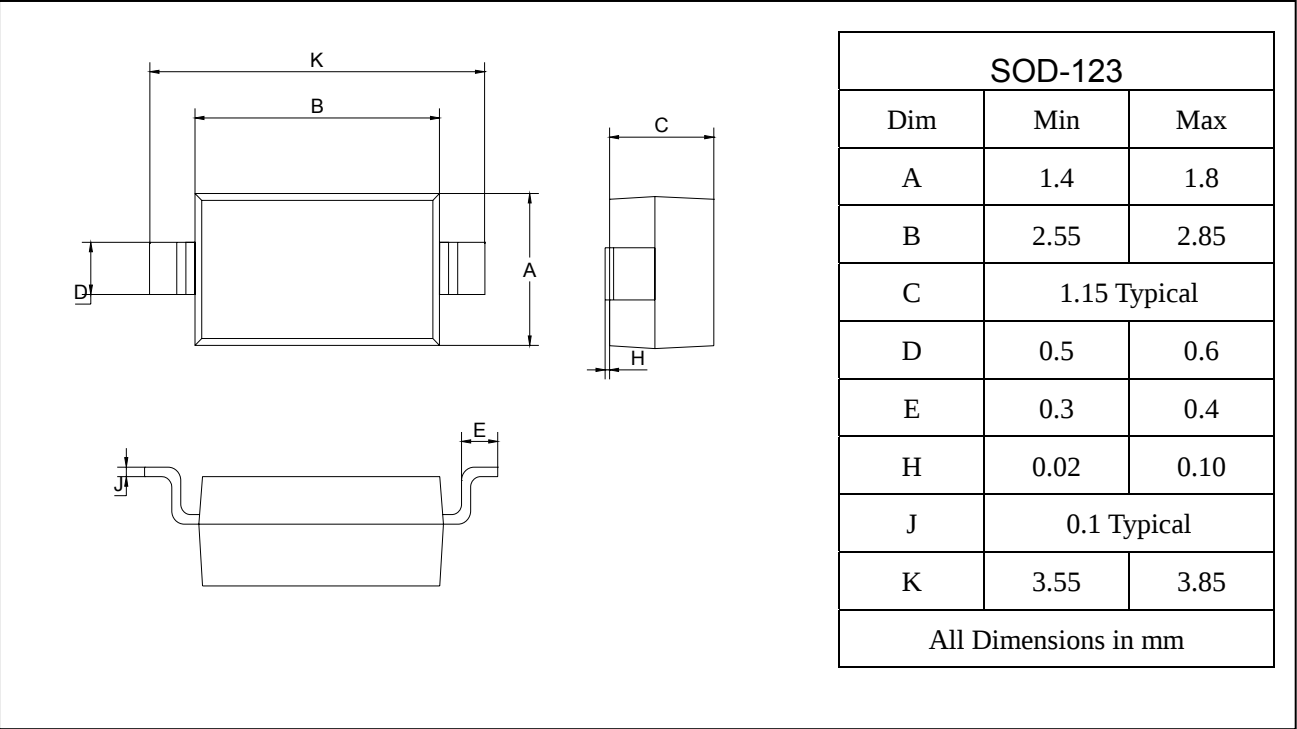
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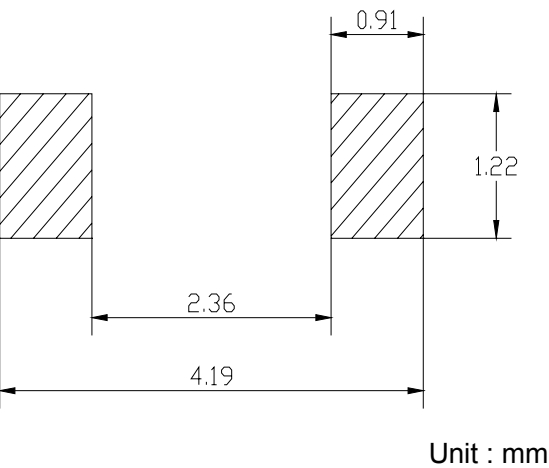
PACKAGE OUTLINE

Plastic surface mounted package

SOD-123



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
BAT42W/43W	SOD-123	3000/Tape&Reel