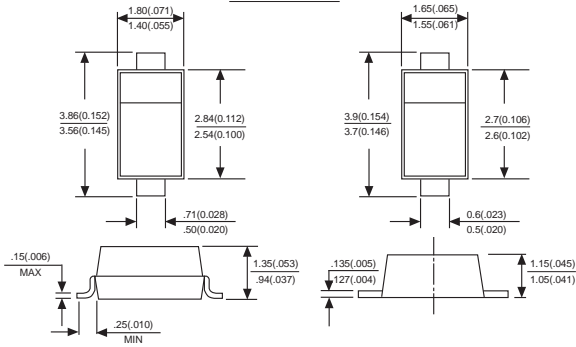


# BAT42W-BAT43W

## SCHOTTKY DIODES

### SOD-123



Dimensions in millimeters and (inches)

### 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

### 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	$\mu\text{A}$	$V_R=25\text{V}$
Capacitance between terminals	$C_T$			10	pF	$V_R=1\text{V}, f=1.0\text{MHz}$
Reverse recovery time	$t_{rr}$			5	ns	$I_F=I_R=10\text{mA}$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$

# RATINGS AND CHARACTERISTIC CURVES BAT42W/BAT43W

FIG. 1- FORWARD CURRENT DERATING CVRVE

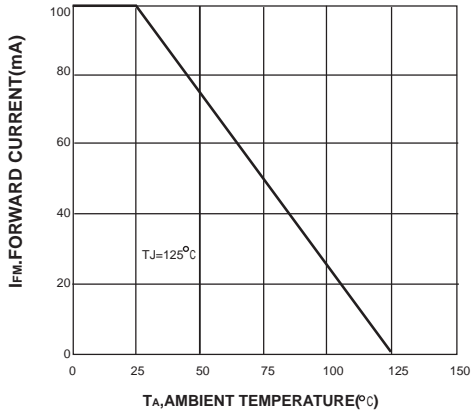


FIG. 2-TYPICAL FORWARD CHARACTERISTIC

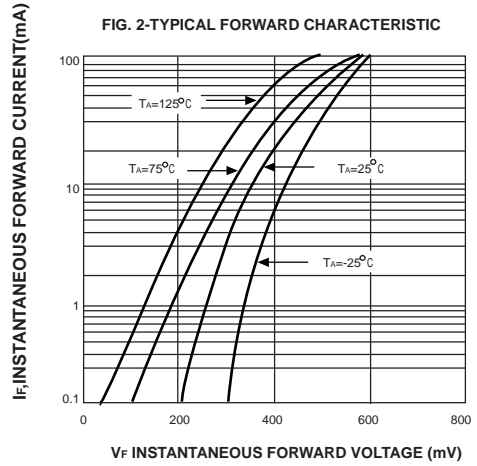


FIG. 3- TYPICAL REVERSE CHARACTERISTICS

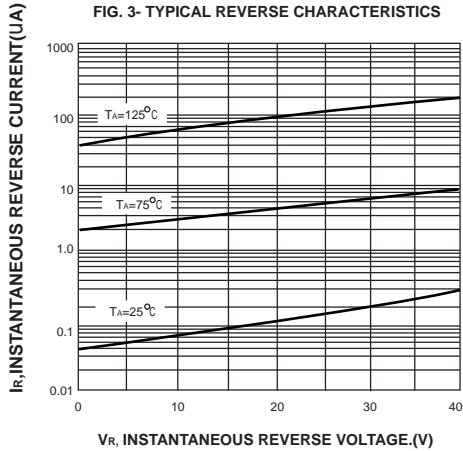


FIG. 4- TOTAL CAPACITANCE VS REVERSE VOLTAGE

