

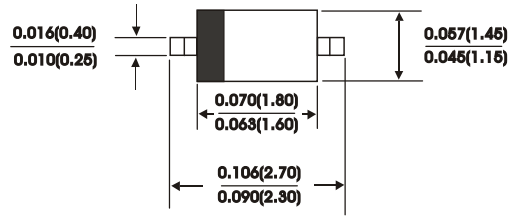
BAT42WS THRU BAT43WS

SURFACE MOUNT SCHOTTKY DIODES

SOD-323

FEATURES:

- Low Forward Voltage drop
- Fast Switching
- Ultra-small Surface Mount Package



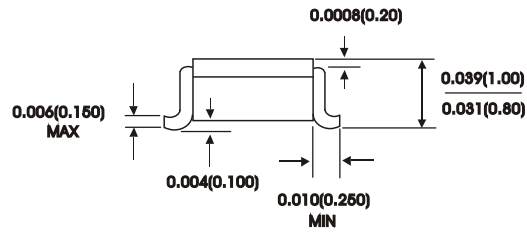
MECHANICAL DATA

Case : SOD-323 plastic

Polarity : Cathode band

Leads : Solderable per MIL-STD-202, Method 208

Weight : 0.004 grams



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25° C ambient temperature unless otherwise specified.

Single phase half wave, 60 Hz resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristic	Symbol	BAT42WS	BAT43WS	Units
Maximum recurrent peak reverse voltage	V_{RRM}	30	30	Volts
Maximum RMS voltage	V_{RMS}	21	21	Volts
Maximum DC blocking voltage	V_{DC}	30	30	Volts
Maximum average forward rectified current at $T_a=25^\circ\text{C}$	$I_{(AV)}$	0.1		Amps
Peak forward surge current 10ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	4		Amps
Maximum instantaneous forward voltage Both Types $I_F=0.2\text{A}$ $I_F=0.01\text{A}$ $I_F=0.05\text{A}$ $I_F=0.002\text{A}$ $I_F=0.015\text{A}$	V_F	0.40 0.65	1.0 0.33 0.45	Volts
Power dissipation (NOTE 2)	P_D	200		mW
Maximum DC reverse current at $V_R=25\text{V}$ $T_a=25^\circ\text{C}$ $T_a=100^\circ\text{C}$	I_R	0.5 100		μA
Minimum reverse breakdown voltage $I_R=100\mu\text{A}$	$V_{(BR)R}$	30		Volts
Typical reverse recovery time (NOTE 1)	T_{RR}	5.0		nS
Total capacitance (NOTE 3)	C_T	10		P_F
Operating and Storage temperature range	T_J, T_{Stg}	-55to+125		$^\circ\text{C}$

NOTES:

(1) Reverse Recovery Test CONDITION : $I_F=I_R=0.01\text{A}$, $I_{RR}=0.25\text{A}$

(3) $V_R=1.0\text{V}$, $f=1.0\text{MHZ}$

RATINGS AND CHARACTERISTIC CURVES BAT42WS THRU BAT43WS

FIG.1 - TYPICAL FORWARD CURRENT DERATING CURVE

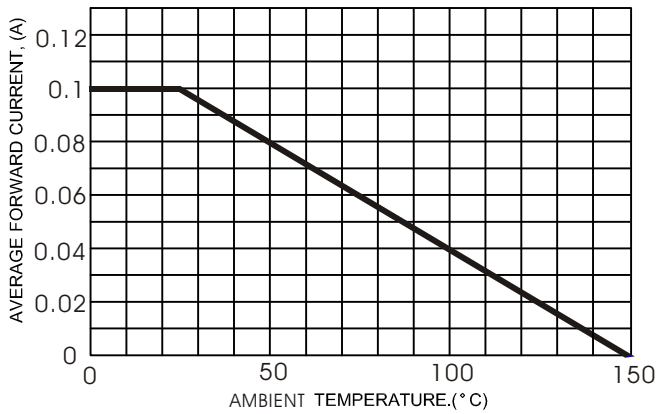


FIG.2 - TYPICAL FORWARD CHARACTERISTICS

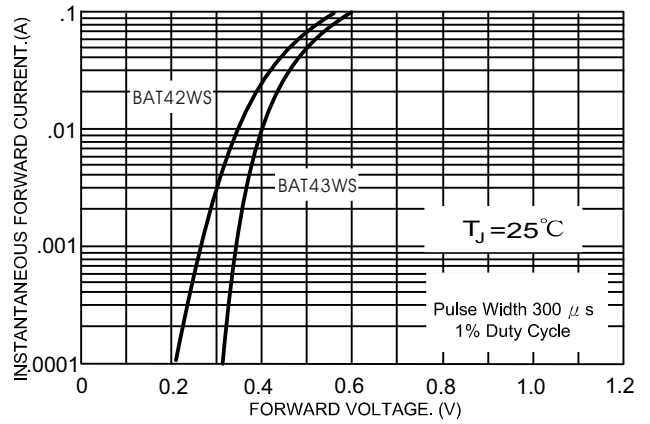


FIG.3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

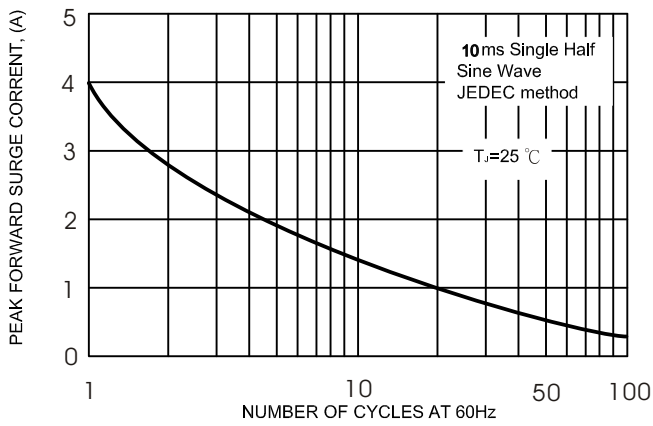


FIG.5- TYPICAL REVERSE CHARACTERISTICS

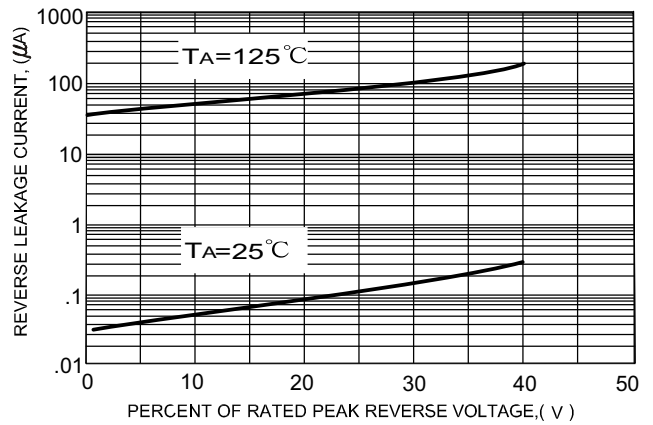


FIG.4- TYPICAL JUNCTION CAPACITANCE

