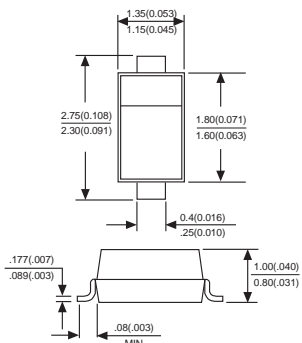


BAT54WS

SCHOTTKY DIODE

SOD-323



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: L9

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

PARAMETER	SYMBOLS	LIMITS	UNITS
DC Blocking voltage	V_R	21	V
Average rectified output current	I_o	100	mA
Forward continuous current	I_{FM}	200	mA
Repetitive peak forward current	I_{FRM}	300	mA
Forward surge current	I_{FSM}	600	mA
Power dissipation	P_d	200	mW
Thermal resistance, junction to ambient air	$R_{\theta JA}$	625	K/W
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{STG}	-65 to +150	$^\circ\text{C}$
Non-Repetitive peak reverse voltage	V_{RM}	30	V

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

PARAMETER	SYMBOLS	Min.	Typ.	Max.	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)R}$	30			V	$I_R=100\mu\text{A}$
Forward voltage	V_{F1}			240	mV	$I_F=0.1\text{mA}$
	V_{F2}			320	mV	$I_F=1.0\text{mA}$
	V_{F3}			400	mV	$I_F=10\text{mA}$
	V_{F4}			500	mV	$I_F=30\text{mA}$
	V_{F5}			1000	mV	$I_F=100\text{mA}$
Reverse current	I_R			2.0	μA	$V_R=25\text{V}$
Capacitance between terminals	C_T			10	pF	$V_R=0, f=1.0\text{MHz}$
Reverse recovery time	t_{rr}			5.0	ns	$I_F=10\text{mA}, I_R=10\text{mA}$ to 1mA $R_L=100\Omega$

RATINGS AND CHARACTERISTIC CURVES BAT54WS

INSTANTANEOUS FORWARD CURRENT- I_F (A)

FIG. 1- MAX.FORWARD VOLTAGE DROP CHARACTERISTICS(PER LEG)

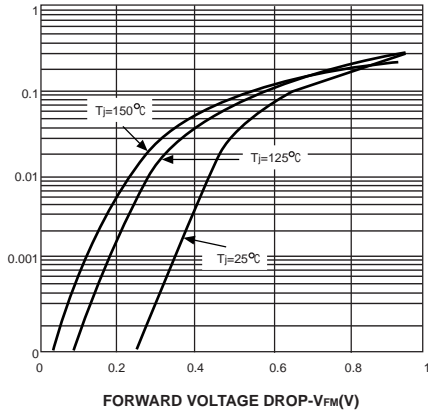
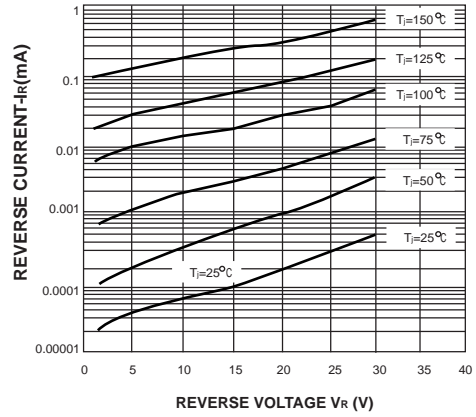
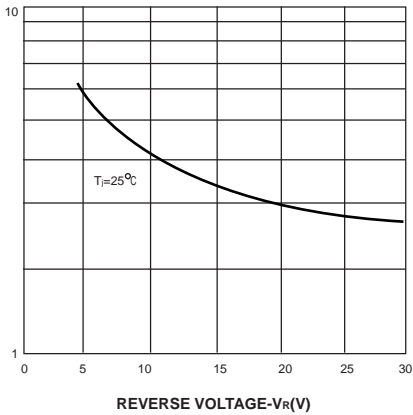


FIG. 2-TYPICAL VALUES OF REVERSE CURRENT VS REVERSE VOLTAGE (PER LEG)



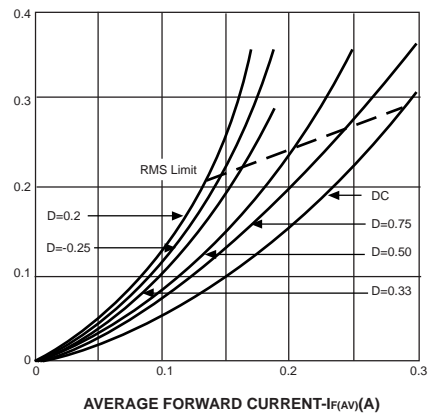
JUNCTION CAPACITANCE- C_j (pF)

FIG. 3- TYPICAL JUNCTION CAPACITANCE



AVERAGE PWER LOSS (Watts)

FIG. 4- FORWARD POWER CHARACTERISTICS



NON-REPETITIVE SURGE CURRENT- I_{FSM} (A)

FIG. 5- MAX NON-REPETITIVE SURGE CURRENT

