

## SCHOTTKY BARRIER DIODE

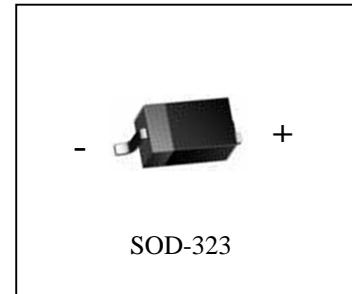
**BAT54WS**
**FEATURES**

Low turn-on voltage.

Fast switching.

Ultra-small surface mount package.

PN junction guard ring for transient and ESD protection.

**MARKING :** L9


MAXIMUM RATING @ Ta=25°C unless otherwise specified

Parameter	Symbol	Limits	Unit
Peak Repetitive reverse voltage	V <sub>RRM</sub>	30	V
Working peak reverse voltage	V <sub>RWM</sub>		
DC reverse voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R</sub> (RMS)	21	V
Average Rectified Output Current	I <sub>O</sub>	100	mA
Forward continuous Current	I <sub>F</sub>	200	mA
Repetitive peak Forward Current	I <sub>FRM</sub>	300	mA
Forward Surge Current @t<1.0s	I <sub>FSM</sub>	600	mA
Power Dissipation	P <sub>d</sub>	200	mW
Thermal resistance,junction to ambient air	R <sub>JA</sub>	625	°C/W
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature range	T <sub>stg</sub>	-65 to 150	°C

ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	I <sub>R</sub> =100μA	30			V
Forward voltage	V <sub>F1</sub>	I <sub>F</sub> =0.1mA			240	mV
	V <sub>F2</sub>	I <sub>F</sub> =1.0mA			320	mV
	V <sub>F3</sub>	I <sub>F</sub> =10mA			400	mV
	V <sub>F4</sub>	I <sub>F</sub> =30mA			500	mV
	V <sub>F5</sub>	I <sub>F</sub> =100mA			1000	mV
Reverse leakage current	I <sub>R</sub>	V <sub>R</sub> =25V			2.0	μA
Reverse recovery time	t <sub>rr</sub>	I <sub>F</sub> =10mA, I <sub>R</sub> =10mA to 1mA R <sub>L</sub> =100			5.0	ns
Junction capacitance	C <sub>J</sub>	V <sub>R</sub> =1.0V,f=1.0MHz			10	pF

## BAT54WS Typical Characteristics

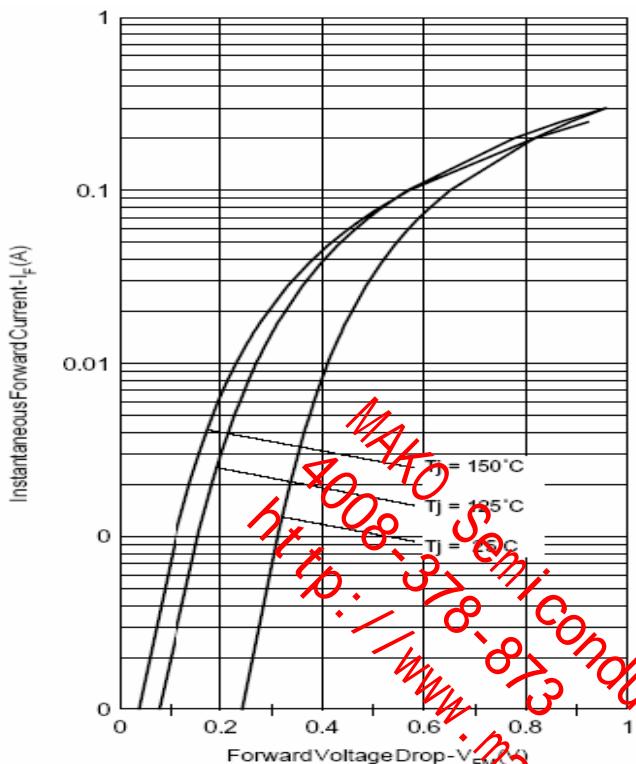


Fig. 1-Max. Forward Voltage Drop Characteristics (PerLeg)

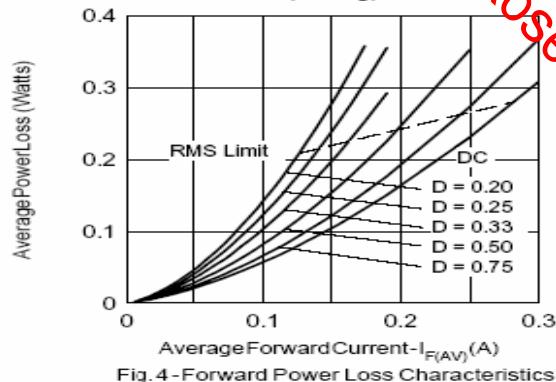


Fig. 4 -Forward Power Loss Characteristics

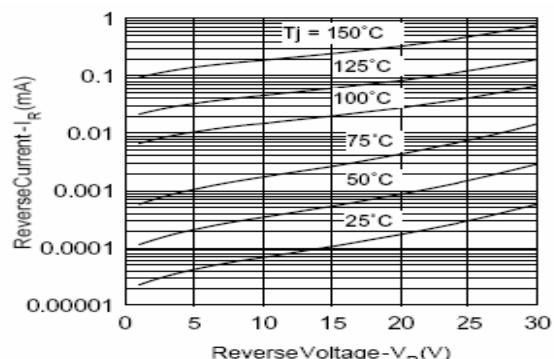


Fig. 2-Typical Values Of Reverse Current Vs. Reverse Voltage (PerLeg)

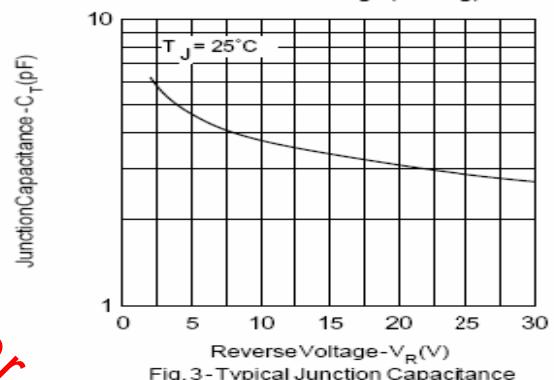


Fig. 3-Typical Junction Capacitance Vs. Reverse Voltage (PerLeg)

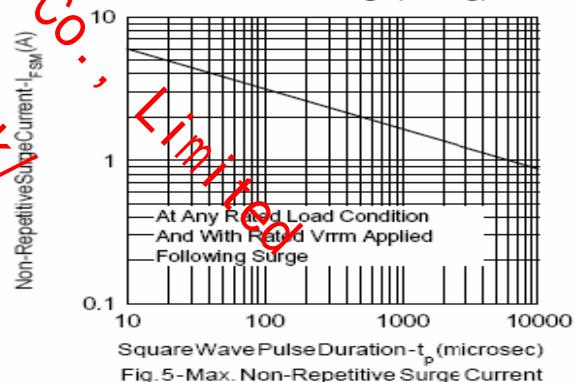


Fig. 5-Max. Non-Repetitive Surge Current