

SCHOTTKY BARRIER DIODE

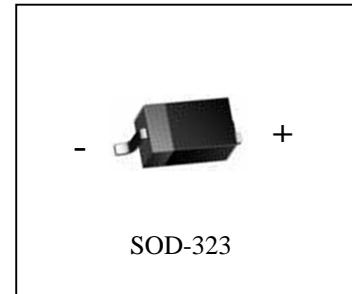
BAT54WS
FEATURES

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 _{RRM} | 30 | V |
| Working peak reverse voltage | V _{RWM} | | |
| DC reverse voltage | V _R | | |
| RMS Reverse Voltage | V _R (RMS) | 21 | V |
| Average Rectified Output Current | I _O | 100 | mA |
| Forward continuous Current | I _F | 200 | mA |
| Repetitive peak Forward Current | I _{FRM} | 300 | mA |
| Forward Surge Current @t<1.0s | I _{FSM} | 600 | mA |
| Power Dissipation | P _d | 200 | mW |
| Thermal resistance,junction to ambient air | R _{JA} | 625 | °C/W |
| Junction temperature | T _j | 125 | °C |
| Storage temperature range | T _{stg} | -65 to 150 | °C |

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

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|---------------------------|--------------------|--|------|------|------|------|
| Reverse Breakdown Voltage | V _{(BR)R} | I _R =100μA | 30 | | | V |
| Forward voltage | V _{F1} | I _F =0.1mA | | | 240 | mV |
| | V _{F2} | I _F =1.0mA | | | 320 | mV |
| | V _{F3} | I _F =10mA | | | 400 | mV |
| | V _{F4} | I _F =30mA | | | 500 | mV |
| | V _{F5} | I _F =100mA | | | 1000 | mV |
| Reverse leakage current | I _R | V _R =25V | | | 2.0 | μA |
| Reverse recovery time | t _{rr} | I _F =10mA, I _R =10mA to 1mA R _L =100 | | | 5.0 | ns |
| Junction capacitance | C _J | V _R =1.0V,f=1.0MHz | | | 10 | pF |

BAT54WS Typical Characteristics

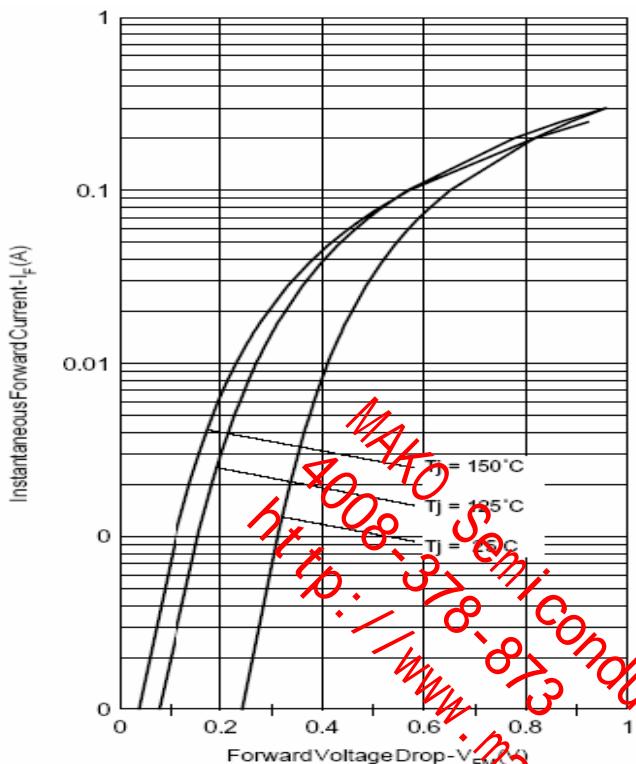


Fig. 1-Max. Forward Voltage Drop Characteristics (PerLeg)

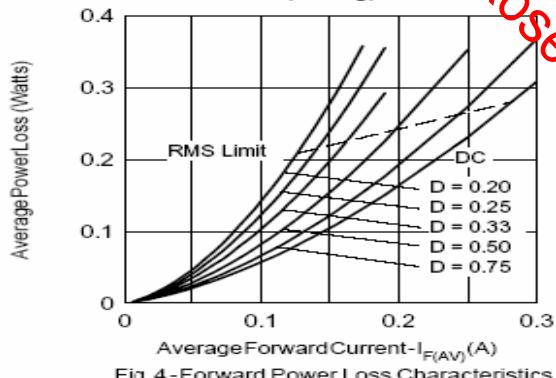


Fig. 4 -Forward Power Loss Characteristics

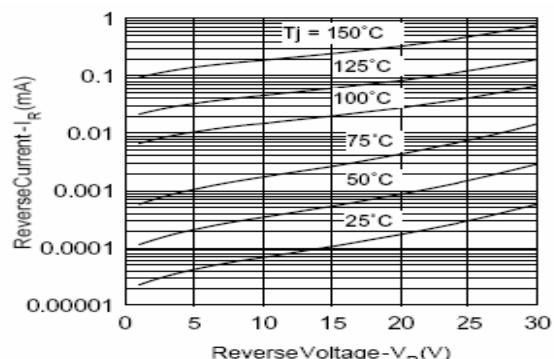


Fig. 2-Typical Values Of Reverse Current Vs. Reverse Voltage (PerLeg)

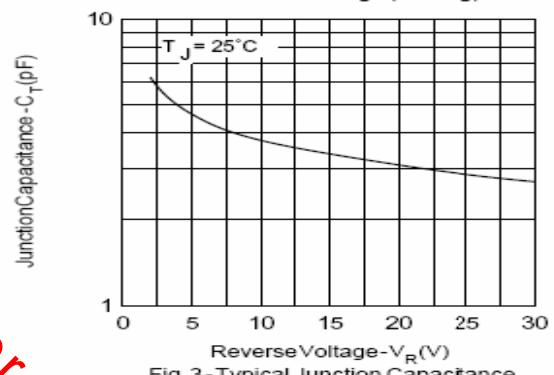


Fig. 3-Typical Junction Capacitance Vs. Reverse Voltage (PerLeg)

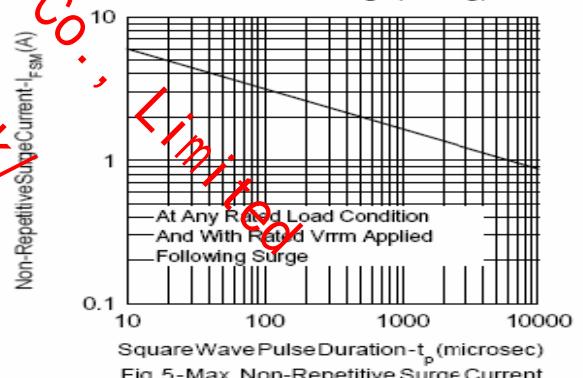


Fig. 5-Max. Non-Repetitive Surge Current