

BAT54W / AW / CW / SW

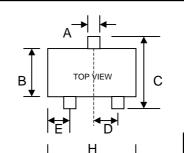
SURFACE MOUNT SCHOTTKY BARRIER DIODE

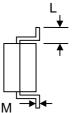
Features

- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and **ESD** Protection
- **Designed for Surface Mount Application**
- Plastic Material UL Recognition Flammability Classification 94V-O

Mechanical Data

- Case: SOT-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.006 grams (approx.)
- Mounting Position: Any





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| SOT-323 | | | | | |
|----------------------|--------------|------|--|--|--|
| Dim | Min | Max | | | |
| Α | 0.30 | 0.40 | | | |
| В | 1.15 | 1.35 | | | |
| c | 2.00 | 2.20 | | | |
| D | 0.65 Nominal | | | | |
| E | 0.30 | 0.40 | | | |
| G | 1.20 | 1.40 | | | |
| Н | 1.80 | 2.20 | | | |
| L | Ι | 0.10 | | | |
| К | 0.90 | 1.10 | | | |
| Г | 0.25 | | | | |
| М | 0.05 | 0.15 | | | |
| All Dimensions in mm | | | | | |









TOP VIEW BAT54W Marking: L4

BAT54AW Marking: L42

TOP VIEW

TOP VIEW

BAT54CW Marking: L43 BAT54SW Marking: L44

Maximum Ratings and Electrical Characteristics, Single Diode @TA=25°C unless otherwise specified

| Characteristic | Symbol | Value | Unit | | | |
|--|------------|------------------------------------|-------------|-----|-----|----|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | | Vrrm Vrwm Vr | 30 | V | | |
| Forward Continuous Current (Note 1) | | orward Continuous Current (Note 1) | | lF | 200 | mA |
| Repetitive Peak Forward Current (Note 1) | | IFRM | 300 | mA | | |
| Forward Surge Current (Note 1) | @ t < 1.0s | IFSM | 600 | mA | | |
| Power Dissipation (Note 1) | | Pd | 200 | mW | | |
| Typical Thermal Resistance, Junction to Ambient Air (Note 1) | | R $	heta$ JA | 625 | K/W | | |
| Operating and Storage Temperature Range | | Тј, Тѕтс | -55 to +125 | °C | | |

Note: 1. Devices are on fiberglass substrate and kept at ambient temperature.

Maximum Ratings and Electrical Characteristics, Single Diode @T_A=25°C unless otherwise specified

| Characteristic | Symbol | Min | Тур | Мах | Unit | Test Condition |
|---------------------------|--------|-----|-----|----------------------------------|------|---|
| Reverse Breakdown Voltage | V(BR)R | 30 | — | _ | V | @ I _{RS} = 100µA |
| Forward Voltage | VF | _ | _ | 240 320 400 500 1000 | mV | $ t_{P} < 300 \mu s, duty cycle < 2\% \\ @ I_{F} = 0.1 mA \\ @ I_{F} = 1 mA \\ @ I_{F} = 10 mA \\ @ I_{F} = 30 mA \\ @ I_{F} = 100 mA \\ @ I_{F} = 10 mA \\ & I_{F} = 10 mA \\ & I_{F} = 10 mA \\ & I_{F} = 10 mA \\ & I_{F} = 10 mA \\ $ |
| Reverse Leakage Current | IR | _ | — | 2.0 | μA | tp < 300 μ s, duty cycle < 2% @ V _R = 25V |
| Junction Capacitance | Cj | _ | — | 10 | pF | V _R = 1.0V, f = 1.0MHz |
| Reverse Recovery Time | trr | _ | _ | 5.0 | nS | I_F = 10mA through I_R = 10mA to I_R = 1.0mA, R_L = 100 Ω |

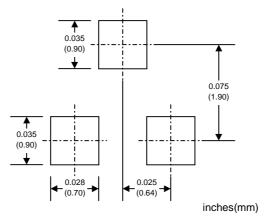
ORDERING INFORMATION

| Product No.+ | Package Type | Shipping Quantity | | |
|--------------|--------------|-------------------|--|--|
| BAT54W-T1 | SOT-323 | 3000/Tape & Reel | | |
| BAT54W-T3 | SOT-323 | 10000/Tape & Reel | | |
| BAT54AW-T1 | SOT-323 | 3000/Tape & Reel | | |
| BAT54AW-T3 | SOT-323 | 10000/Tape & Reel | | |
| BAT54CW-T1 | SOT-323 | 3000/Tape & Reel | | |
| BAT54CW-T3 | SOT-323 | 10000/Tape & Reel | | |
| BAT54SW-T1 | SOT-323 | 3000/Tape & Reel | | |
| BAT54SW-T3 | SOT-323 | 10000/Tape & Reel | | |

Products listed in **bold** are WTE **Preferred** devices. *T1 suffix refers to a 7" reel. T3 suffix refers to a 13" reel.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

RECOMMENDED FOOTPRINT



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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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