# QUNHAN TECH

# BAT54H

## Surface Mount Schottky Barrier Diodes

SMALL SIGNAL
SCHOTTKY DIODES
200m AMPERES
30 VOLTS

**Features:**

*Extremely Fast Switching Speed
*Low Forward Voltage
*Very Small Conduction Losses
*Schottky Barrier Diodes Encapsulated in a SOD-323 Package

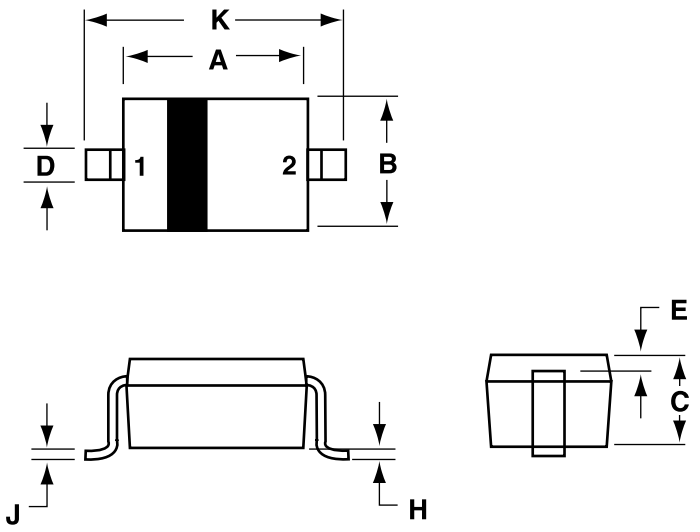
**Description:**

These schottky barrier diodes are designed for high speed switching applications circuit protection, and voltage clamping, Extremely low forward voltage reduces conduction loss, Miniature surface mount package is excellent for hand held and portable applications where space is limited.


**SOD-323**

## SOD-323 Outline Dimensions

Unit:mm




| Dim | MILLMETERS | |
|---|---|---|
| | Min | Max |
| A | 1.60 | 1.80 |
| B | 1.15 | 1.35 |
| C | 0.80 | 1.00 |
| D | 0.25 | 0.40 |
| E | 0.15REF | |
| H | 0.00 | 0.10 |
| J | 0.089 | 0.377 |
| K | 2.30 | 2.70 |

**PIN 1.CATHODE**
**2.ANODE**

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## Maximum Ratings (TJ=125°C Unless otherwise noted)

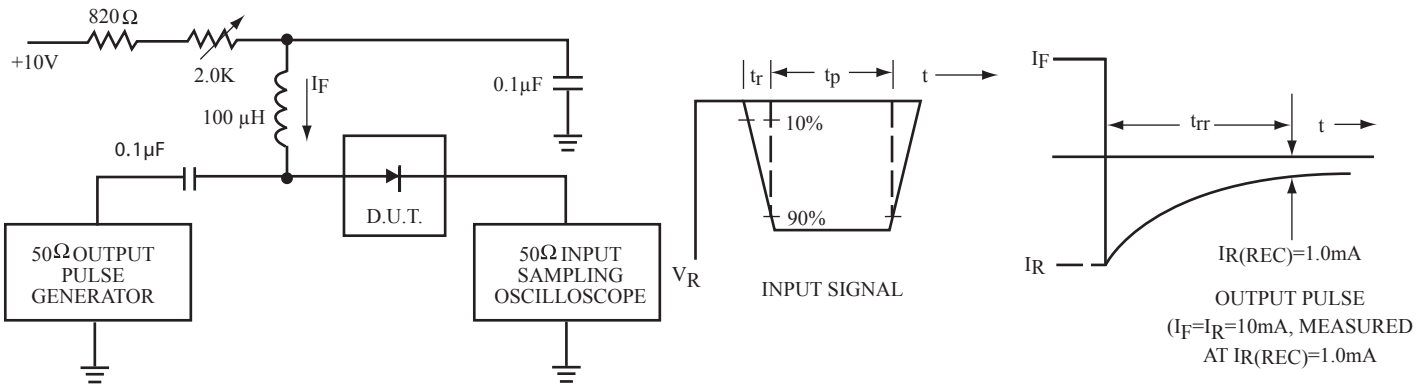
| Characteristic | Symbol | BAT54H | Unit |
|---|---|---|---|
| Reverse Voltage | $V_R$ | 30 | Volts |
| Average Rectifier Forward Current | $I_{F(AV)}$ | 200 | mA |
| Peak Repetitive Forward Current Rated $V_R$, Square Wave,20KHz | $I_{FRM}$ | 400 | mA |
| Operating Junction Temperature Range | $T_J$ | -55 to +125 | °C |
| Storage Temperature Range | $T_{stg}$ | -55 to +150 | °C |

## Electrical Characteristics (TA=25°C Unless otherwise noted)

| Characteristic | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|
| Reverse Breakdown Voltage ($I_R$=10μA) | $V_{(BR)R}$ | 30 | | | Volts |
| Forward Voltage<br>$I_F$=0.1mA<br>$I_F$=1.0mA<br>$I_F$=10mA<br>$I_F$=30mA<br>$I_F$=100mA | $V_F$ | | <br>0.22<br>0.29<br>0.35<br>0.41<br>0.52 | <br>0.24<br>0.32<br>0.40<br>0.50<br>1.00 | Volts |
| Total Capacitance ($V_R$=1.0V, f=1.0MHz) | $C_T$ | | 7.6 | 10 | PF |
| Reverse Leakage $V_R$=25V | $I_R$ | | 0.5 | 2.0 | μAdc |
| Reverse Recover Time $I_F$=$I_R$ =10mA, $I_{R(Rec)}$=1.0mA | Trr | | | 5.0 | nS |

## Device Marking

| Item | Marking | Eqivalent Circuit diagram |
|---|---|---|
| BAT54H | JV | 1 ○—▶|—○ 2 |




Notes:1. A 2.0 kΩ variable resistor for a Forward Current ($I_F$) 0f 10 mA

2. Input pules is adjusted so $I_R$(peak) is equal to 10 mA

3. $t_p \gg t_{rr}$

**Figure 1. Recovery Time Equivalent Test Circuit**

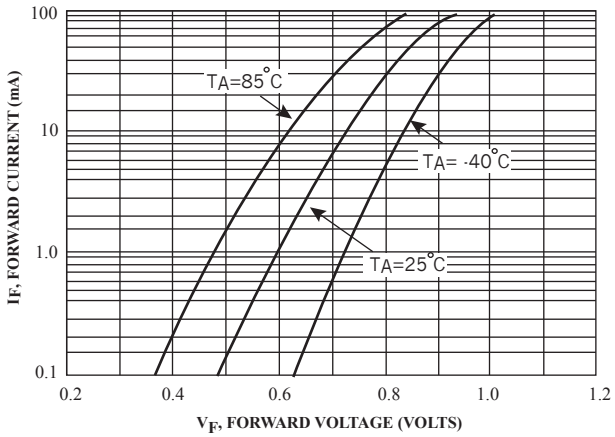



**Figure 2. Forward Voltage**

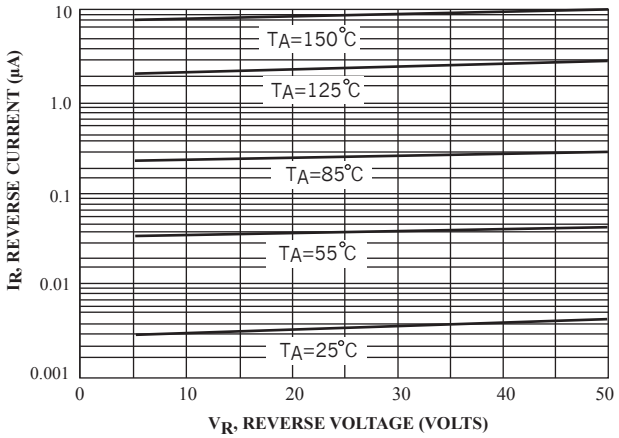



**Figure 3. Leakage Current**

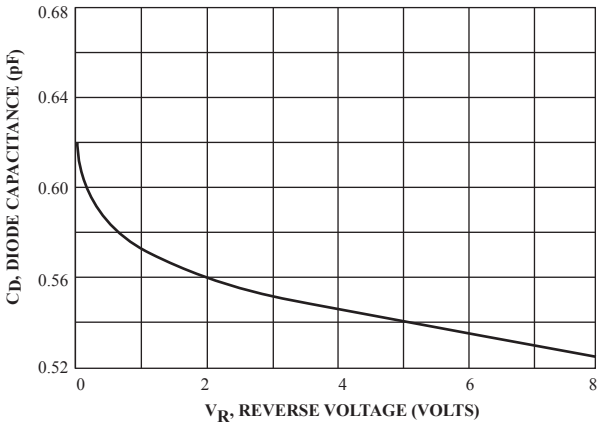



**Figure 4. Capacitance**