


設計驗證
工程課
2026 -03- 03
發行
益鼎科技開發股份有限公司

# 承　　認　　書

# APPROVAL　SHEET

| | |
|---|---|
| **客戶名稱：** | 鈺緯科技開發股份有限公司 |
| **客戶料號：** | 3DBAT54009Y (D0182) |
| **零件敘述：** | DIODE Schottky Barrier SCHOTT 30V 200MA SOT23 |
| **零件料號：** | BAT54C-TP |
| **零件廠牌：** | MCC |
| **承認日期：** | 2026.02.23 |

| 客戶認可章 | 晨昕公司發行章 |
|---|---|
| 設計驗證 工程課 2026 -03- 03 發行 鈺緯科技開發股份有限公司 | 晨昕 發行章 |

SRT 晨昕科技股份有限公司
SUNRISETEK CO., LTD.

TEL:02-2226-7955　FAX:02-2221-3858

## Features

- Low Forward Voltage
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free. “Green” Device (Note 1)
- Lead Free Finish/Rohs Compliant ("P"Suffix Designates RoHS Compliant. See Ordering Information)

# 250mW,30V Schottky Barrier Diode

## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +125°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance(Note2): 400°C/W Junction to Ambient

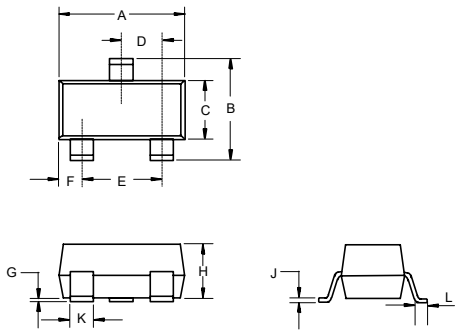
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | RMS Reverse Voltage $V_{R(RMS)}$ | Maximum DC Blocking Voltage |
|---|---|---|---|---|
| BAT54 | KL1 | 30V | 21V | 30V |
| BAT54A | KL2 | 30V | 21V | 30V |
| BAT54C | KL3 | 30V | 21V | 30V |
| BAT54S | KL4 | 30V | 21V | 30V |

### Electrical Characteristics @ 25°C Unless Otherwise Specified

| | | | |
|---|---|---|---|
| Average Forward Current | $I_{F(AV)}$ | 200mA | |
| Peak Forward Surge Current | $I_{FSM}$ | 600mA | t<1s |
| Power Dissipation | $P_d$ | 250mW | $T_A$= 25 °C |
| Maximum Forward Voltage | $V_F$ | 240mV<br>320mV<br>400mV<br>500mV<br>800mV | $I_F$=0.1mA<br>$I_F$=1.0mA<br>$I_F$=10mA<br>$I_F$=30mA<br>$I_F$=100mA |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$ | 2μA | $V_R$ = 25V |
| Minimum Reverse Breakdown Voltage | $V_{(BR)}$ | 30V | $I_R$=100μA |
| Maximum Junction Capacitance | $C_J$ | 10.0pF | Measured at 1.0MHz, $V_R$=1.0V |
| Maximum Reverse Recovery Time | $t_{rr}$ | 5.0ns | $I_F$=$I_R$=10mA; $I_{rr}$=0.1×$I_R$,$R_L$=100Ω |

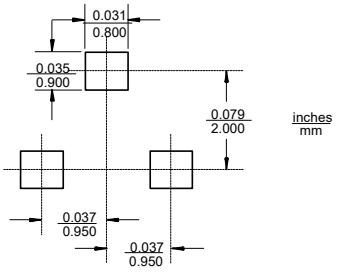
Note:
1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. Device mounted on an 1inchx1inchx2oz copper FR4 PCB, single-sided copper,reference footprint

## SOT-23

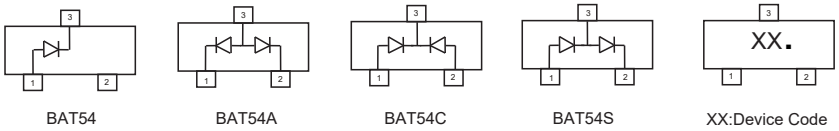



| DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | 0.110 | 0.120 | 2.80 | 3.04 | |
| B | 0.083 | 0.104 | 2.10 | 2.64 | |
| C | 0.047 | 0.055 | 1.20 | 1.40 | |
| D | 0.034 | 0.041 | 0.85 | 1.05 | |
| E | 0.067 | 0.083 | 1.70 | 2.10 | |
| F | 0.018 | 0.024 | 0.45 | 0.60 | |
| G | 0.0004 | 0.006 | 0.01 | 0.15 | |
| H | 0.035 | 0.043 | 0.90 | 1.10 | |
| J | 0.003 | 0.007 | 0.08 | 0.18 | |
| K | 0.012 | 0.020 | 0.30 | 0.51 | |
| L | 0.007 | 0.020 | 0.20 | 0.50 | |

Suggested Solder Pad Layout



## Internal Structure and Marking Code




BAT54 BAT54A BAT54C BAT54S XX:Device Code

## Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

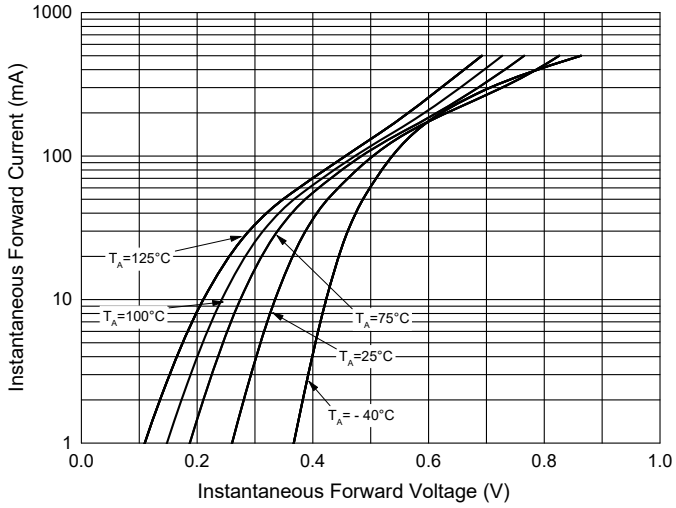



Fig. 2 - Typical Reverse Leakage Characteristics

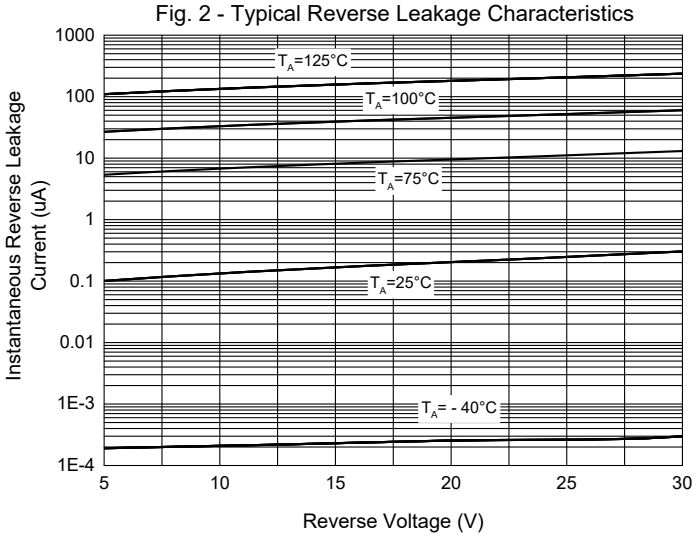



Fig. 3 - Capacitance Characteristics

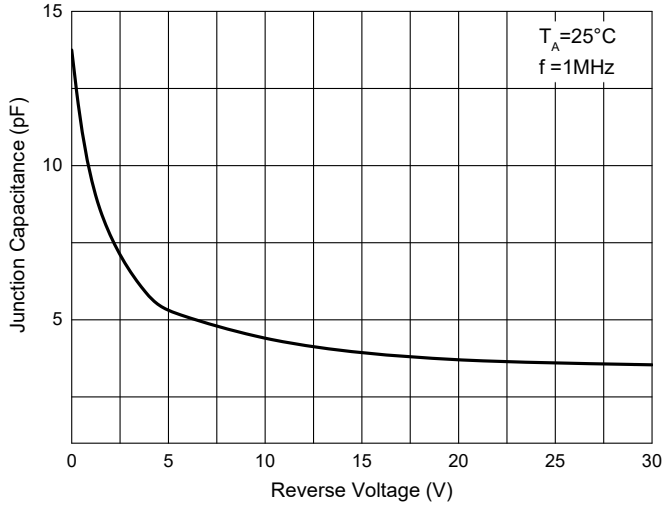
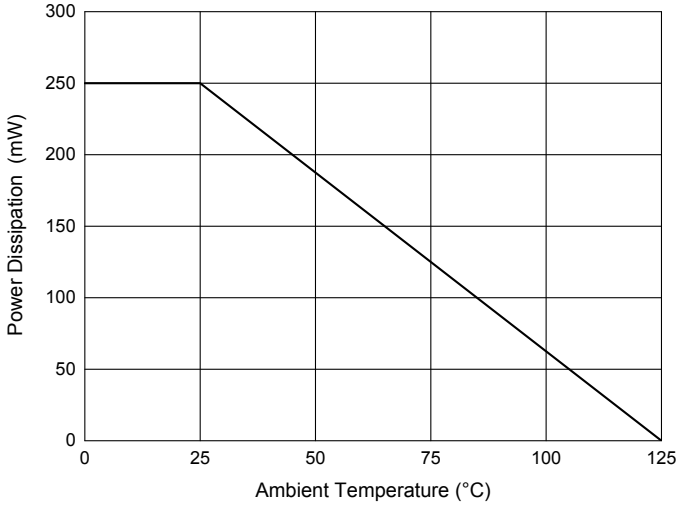



Fig. 3 - Power Derating Curve



## Ordering Information

| Device | Packing |
|---|---|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |
| Part Number-13P | Tape&Reel: 10Kpcs/Reel |

For packaging details, go to our website at: https://www.mccsemi.com/pdf/productpackaging/SOT-23_Packing_Rev_I.pdf

*****IMPORTANT NOTICE*****

***Micro Commercial Components Corp***. reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . ***Micro Commercial Components Corp*** . does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold ***Micro Commercial Components Corp*** . and all the companies whose products are represented on our website, harmless against all damages. ***Micro Commercial Components Corp***. products are sold subject to the general terms and conditions of commercial sale, as published at
**https://www.mccsemi.com/Home/TermsAndConditions.**

*****LIFE SUPPORT*****

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

*****CUSTOMER AWARENESS*****

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources**. MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.