

CBAT54  
CBAT54A  
CBAT54C  
CBAT54S

SURFACE MOUNT  
SILICON SCHOTTKY DIODES



SOT-23 CASE

CBAT54: SINGLE  
CBAT54A: DUAL, COMMON ANODE  
CBAT54C: DUAL, COMMON CATHODE  
CBAT54S: DUAL, IN SERIES



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#### DESCRIPTION:

The CENTRAL SEMICONDUCTOR CBAT54 Series types are Silicon Schottky Diodes in an SOT-23 Surface Mount Package.

**MARKING CODE: CL4**  
**MARKING CODE: CL42**  
**MARKING CODE: CL43**  
**MARKING CODE: CL44**

#### MAXIMUM RATINGS: ( $T_A=25^\circ\text{C}$ )

|  | SYMBOL         | UNITS                       |
|--|----------------|-----------------------------|
| Continuous Reverse Voltage                 | $V_R$          | V                           |
| Continuous Forward Current                 | $I_F$          | mA                          |
| Peak Repetitive Forward Current            | $I_{FRM}$      | mA                          |
| Forward Surge Current, $t_p=10\text{ms}$   | $I_{FSM}$      | mA                          |
| Power Dissipation                          | $P_D$          | mW                          |
| Operating and Storage Junction Temperature | $T_J, T_{stg}$ | ${}^\circ\text{C}$          |
| Thermal Resistance                         | $\Theta_{JA}$  | ${}^\circ\text{C}/\text{W}$ |

#### ELECTRICAL CHARACTERISTICS PER DIODE: ( $T_A=25^\circ\text{C}$ unless otherwise noted)

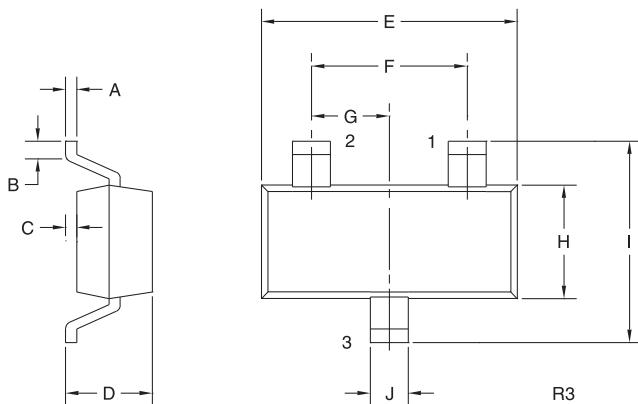
| SYMBOL   | TEST CONDITIONS   | MAX | UNITS         |
|----------|---|-----|---------------|
| $I_R$    | $V_R=25\text{V}$  | 2.0 | $\mu\text{A}$ |
| $V_F$    | $I_F=0.1\text{mA}$  | 240 | mV            |
| $V_F$    | $I_F=1.0\text{mA}$  | 320 | mV            |
| $V_F$    | $I_F=10\text{mA}$   | 400 | mV            |
| $V_F$    | $I_F=30\text{mA}$   | 500 | mV            |
| $V_F$    | $I_F=100\text{mA}$  | 800 | mV            |
| $C_d$    | $V_R=1.0\text{V}, f=1.0\text{MHz}$                        | 10  | pF            |
| $t_{rr}$ | $I_F=I_R=10\text{mA}, I_{rr}=1.0\text{mA}, R_L=100\Omega$ | 5.0 | ns            |

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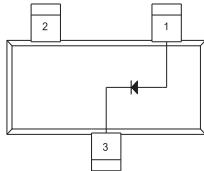


### SOT-23 CASE - MECHANICAL OUTLINE

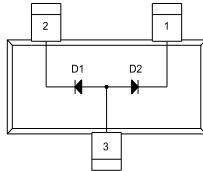


| SYMBOL | INCHES |       | MILLIMETERS |      |
|--------|--------|-------|-------------|------|
|        | MIN    | MAX   | MIN         | MAX  |
| A      | 0.003  | 0.007 | 0.08        | 0.18 |
| B      | 0.006  | -     | 0.15        | -    |
| C      | -      | 0.005 | -           | 0.13 |
| D      | 0.035  | 0.043 | 0.89        | 1.09 |
| E      | 0.110  | 0.120 | 2.80        | 3.05 |
| F      | 0.075  | -     | 1.90        | -    |
| G      | 0.037  | -     | 0.95        | -    |
| H      | 0.047  | 0.055 | 1.19        | 1.40 |
| I      | 0.083  | 0.098 | 2.10        | 2.49 |
| J      | 0.014  | 0.020 | 0.35        | 0.50 |

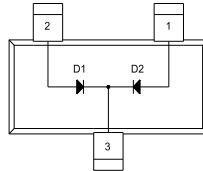
SOT-23 (REV: R3)



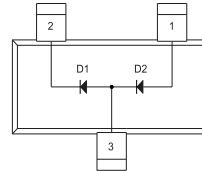
**LEAD CODE:**  
**CBAT54**  
1) Anode  
2) No Connection  
3) Cathode  
**MARKING**  
**CODE: CL4**



**LEAD CODE:**  
**CBAT54A**  
1) Cathode D2  
2) Cathode D1  
3) Anode D1, Anode D2  
**MARKING**  
**CODE: CL42**



**LEAD CODE:**  
**CBAT54C**  
1) Anode D2  
2) Anode D1  
3) Cathode D1, Cathode D2  
**MARKING**  
**CODE: CL43**



**LEAD CODE:**  
**CBAT54S**  
1) Anode D2  
2) Cathode D1  
3) Anode D1, Cathode D2  
**MARKING**  
**CODE: CL44**

R1 (20-November 2009)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

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