

CMPH-3E  
CMPH-3AE  
CMPH-3CE  
CMPH-3SE

**ENHANCED SPECIFICATION  
SURFACE MOUNT  
SILICON SCHOTTKY DIODES**



**SOT-23 CASE**



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**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPH-3E Series types are Enhanced Versions of the CMPH-3 Series of Silicon Schottky Diodes in an SOT-23 Surface Mount Package.

**FEATURED ENHANCED SPECIFICATIONS:**

- ◆  $I_F$  from 100mA max to 200mA max.
- ◆  $BV_R$  from 30V min to 40V min.
- ◆  $V_F$  from 1.0V max to 0.8V max.

CMPH-3E: SINGLE  
CMPH-3AE: DUAL, COMMON ANODE  
CMPH-3CE: DUAL, COMMON CATHODE  
CMPH-3SE: DUAL, IN SERIES

**MARKING CODE: D95E**  
**MARKING CODE: DB1E**  
**MARKING CODE: DB2E**  
**MARKING CODE: DA5E**

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

- ◆ **Peak Repetitive Reverse Voltage**
- ◆ **Continuous Forward Current**
- Peak Repetitive Forward Voltage
- Forward Surge Current,  $t_p=10\text{ms}$
- Power Dissipation
- Operating and Storage Junction Temperature
- Thermal Resistance

| SYMBOL         |             | UNITS              |
|----------------|-------------|--------------------|
| $V_{RRM}$      | 40          | V                  |
| $I_F$          | 200         | mA                 |
| $I_{FRM}$      | 350         | mA                 |
| $I_{FSM}$      | 750         | mA                 |
| $P_D$          | 350         | mW                 |
| $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$   |
| $\Theta_{JA}$  | 357         | $^\circ\text{C/W}$ |

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

| SYMBOL    | TEST CONDITIONS                                           | MIN | TYP  | MAX  | UNITS         |
|-----------|-----------------------------------------------------------|-----|------|------|---------------|
| $I_R$     | $V_R=25\text{V}$                                          |     | 90   | 500  | nA            |
| $I_R$     | $V_R=25\text{V}, T_A=100^\circ\text{C}$                   |     | 25   | 100  | $\mu\text{A}$ |
| ◆ $BV_R$  | $I_R=100\mu\text{A}$                                      | 40  | 50   |      | V             |
| $V_F$     | $I_F=2.0\text{mA}$                                        |     | 0.29 | 0.33 | V             |
| ◆ $V_F$   | $I_F=15\text{mA}$                                         |     | 0.37 | 0.42 | V             |
| ◆ $V_F$   | $I_F=100\text{mA}$                                        |     | 0.61 | 0.80 | V             |
| ◆ ◆ $V_F$ | $I_F=200\text{mA}$                                        |     | 0.65 | 1.0  | V             |
| $C_T$     | $V_R=1.0\text{V}, f=1.0\text{MHz}$                        |     | 7.0  |      | pF            |
| $t_{rr}$  | $I_F=I_R=10\text{mA}, I_{rr}=1.0\text{mA}, R_L=100\Omega$ |     |      | 5.0  | ns            |

- ◆ Enhanced specification
- ◆ ◆ Additional Enhanced specification

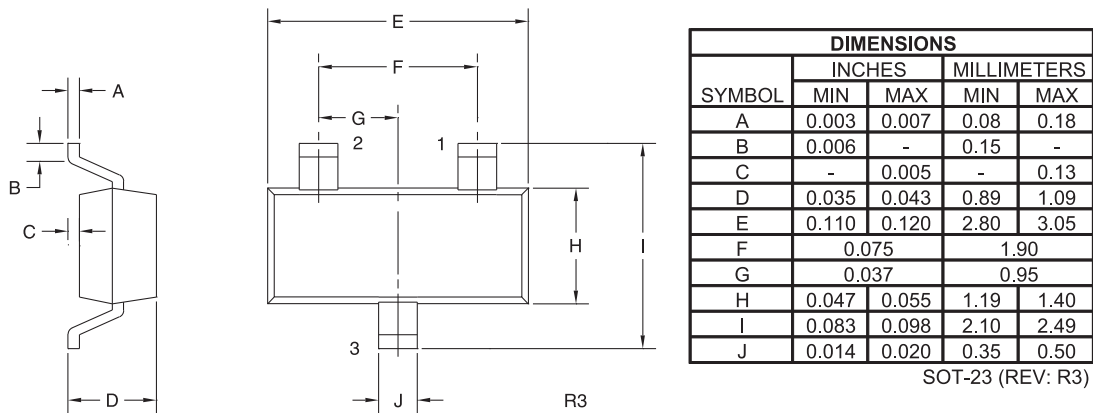
R3 (27-January 2010)

CMPSH-3E  
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CMPSH-3CE  
CMPSH-3SE

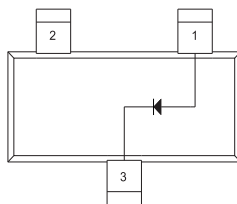
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**SOT-23 CASE - MECHANICAL OUTLINE**



**PIN CONFIGURATIONS**

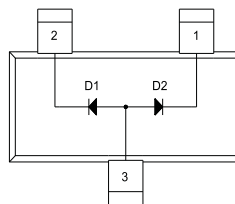


**CMPSH-3E**

**LEAD CODE:**

- 1) Anode
- 2) No Connection
- 3) Cathode

**MARKING CODE: D95E**

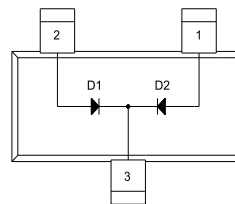


**CMPSH-3AE**

**LEAD CODE:**

- 1) Cathode D2
- 2) Cathode D1
- 3) Anode D1, D2

**MARKING CODE: DB1E**

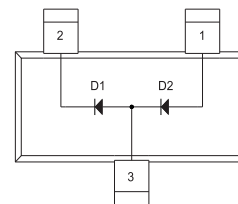


**CMPSH-3CE**

**LEAD CODE:**

- 1) Anode D2
- 2) Anode D1
- 3) Cathode D1, D2

**MARKING CODE: DB2E**



**CMPSH-3SE**

**LEAD CODE:**

- 1) Anode D2
- 2) Cathode D1
- 3) Anode D1, Cathode D2

**MARKING CODE: DA5E**

R3 (27-January 2010)

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