

CMPSH05-4

**SURFACE MOUNT
HIGH CURRENT, LOW V_F
SILICON SCHOTTKY DIODE**



SOT-23 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPSH05-4 is a HIGH CURRENT, LOW V_F 40 volt Schottky Diode packaged in a space saving SOT-23 surface mount case. This device has been designed for small signal general purpose applications when small size and operational efficiency are prime requirements.

MARKING CODE: C054

FEATURES:

- Low V_F = 0.35V max @ 100mA
- V_{RRM} = 40V
- I_F = 500mA

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

Peak Repetitive Reverse Voltage
Continuous Forward Current
Peak Repetitive Forward Current, $t_p \leq 1.0\text{ms}$
Peak Forward Surge Current, $t_p = 8.0\text{ms}$
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

| SYMBOL | | UNITS |
|----------------|-------------|--------------------|
| V_{RRM} | 40 | V |
| I_F | 500 | mA |
| I_{FRM} | 3.5 | A |
| I_{FSM} | 10 | A |
| P_D | 350 | mW |
| T_J, T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| Θ_{JA} | 357 | $^\circ\text{C/W}$ |

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

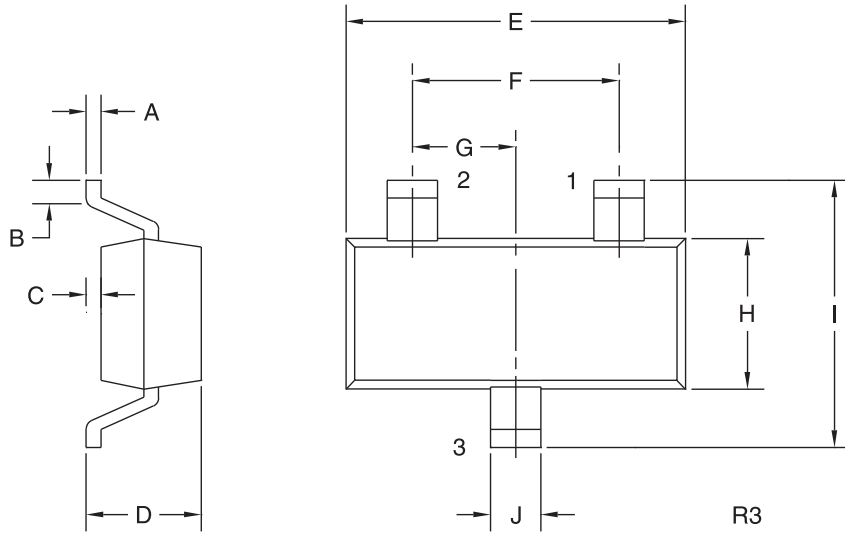
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|--------|------------------------------------|-----|------|---------------|
| I_R | $V_R=10\text{V}$ | | 20 | μA |
| I_R | $V_R=30\text{V}$ | | 100 | μA |
| BV_R | $I_R=500\mu\text{A}$ | 40 | | V |
| V_F | $I_F=100\mu\text{A}$ | | 0.13 | V |
| V_F | $I_F=1.0\text{mA}$ | | 0.21 | V |
| V_F | $I_F=10\text{mA}$ | | 0.27 | V |
| V_F | $I_F=100\text{mA}$ | | 0.35 | V |
| V_F | $I_F=500\text{mA}$ | | 0.47 | V |
| C_T | $V_R=1.0\text{V}, f=1.0\text{MHz}$ | | 50 | pF |

R1 (27-January 2010)

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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODE: C054

| DIMENSIONS | | | | |
|-------------------|---------------|------------|--------------------|------------|
| 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)

R1 (27-January 2010)