

**CMPSH05-4****SURFACE MOUNT SILICON  
HIGH CURRENT, LOW  $V_F$   
SCHOTTKY DIODE****SOT-23 CASE**[www.centrasemi.com](http://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 | $^\circ\text{C}$   |
| $\theta_{JA}$  | 357         | $^\circ\text{C/W}$ |

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

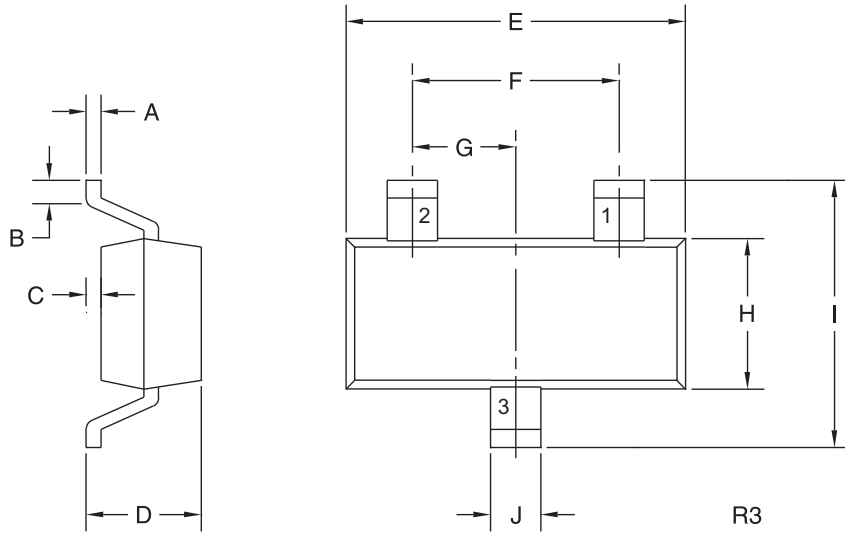
| SYMBOL | TEST CONDITIONS                    | MIN | MAX  | UNITS         |
|--------|------------------------------------|-----|------|---------------|
| $I_R$  | $V_R=10\text{V}$                   |     | 30   | $\mu\text{A}$ |
| $I_R$  | $V_R=30\text{V}$                   |     | 100  | $\mu\text{A}$ |
| $BV_R$ | $I_R=500\mu\text{A}$               | 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             |
| $C_J$  | $V_R=1.0\text{V}, f=1.0\text{MHz}$ |     | 50   | pF            |

CMP5H05-4

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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)

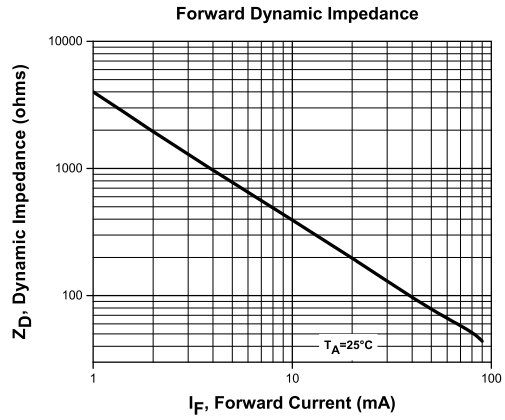
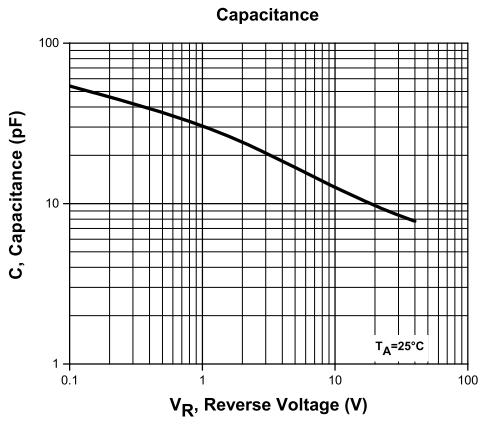
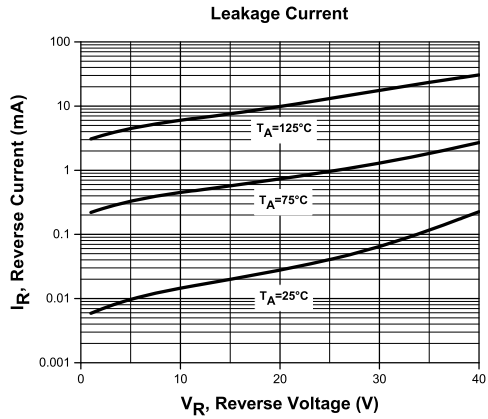
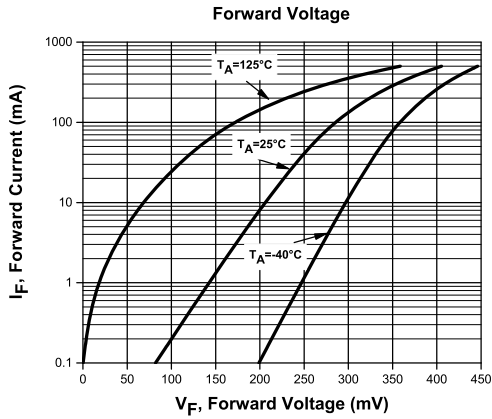
R3 (8-January 2018)

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TYPICAL ELECTRICAL CHARACTERISTICS



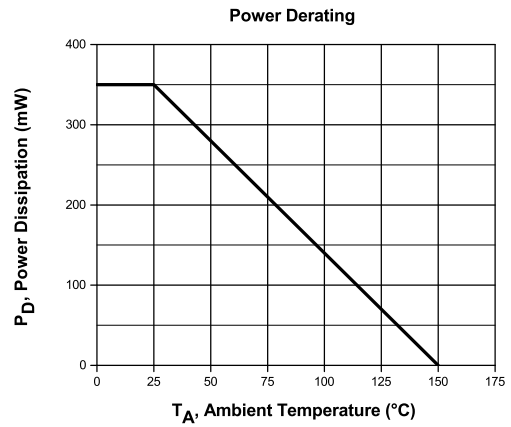
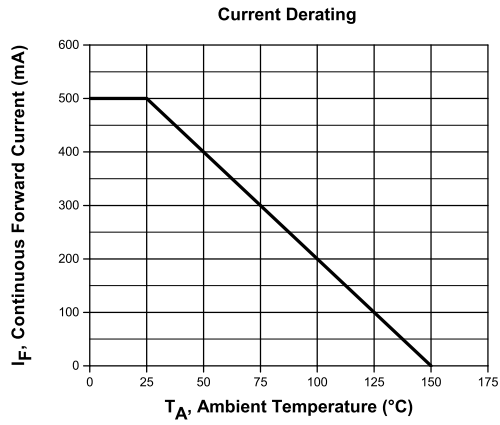
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TYPICAL ELECTRICAL CHARACTERISTICS



R3 (8-January 2018)

## 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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