

CMSH5-20 CMSH5-60  
CMSH5-40 CMSH5-100

**SURFACE MOUNT SILICON  
SCHOTTKY RECTIFIERS  
5.0 AMP, 20 THRU 100 VOLT**



**SMC CASE**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMSH5-20 series 5.0 Amp surface mount silicon Schottky rectifiers are highly reliable components designed for use in all types of commercial, industrial, entertainment, computer, and automotive applications. To order devices on 16mm Tape and Reel (3000/13" Reel), add TR13 suffix to part number.

**MARKING CODE: SEE MARKING CODE TABLE ON FOLLOWING PAGE**

**FEATURES:**

- High reliability
- Special selections available
- "C" bend construction provides strain relief when mounted on PC board

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

|                                                      | SYMBOL         | CMSH5<br>-20 | CMSH5<br>-40 | CMSH5<br>-60 | CMSH5<br>-100 | UNITS                |
|------------------------------------------------------|----------------|--------------|--------------|--------------|---------------|----------------------|
| Peak Repetitive Reverse Voltage                      | $V_{RRM}$      | 20           | 40           | 60           | 100           | V                    |
| DC Blocking Voltage                                  | $V_R$          | 20           | 40           | 60           | 100           | V                    |
| RMS Reverse Voltage                                  | $V_{R(RMS)}$   | 14           | 28           | 42           | 71            | V                    |
| Average Forward Current ( $T_A=75^{\circ}\text{C}$ ) | $I_O$          |              |              | 5.0          |               | A                    |
| Peak Forward Surge Current, $t_p=8.3\text{ms}$       | $I_{FSM}$      |              |              | 125          |               | A                    |
| Operating and Storage Junction Temperature           | $T_J, T_{stg}$ |              | -65 to +150  |              |               | $^{\circ}\text{C}$   |
| Thermal Resistance                                   | $\theta_{JL}$  |              | 10           |              |               | $^{\circ}\text{C/W}$ |

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

| SYMBOL | TEST CONDITIONS                                      | TYP  | MAX  | UNITS |
|--------|------------------------------------------------------|------|------|-------|
| $I_R$  | $V_R=\text{Rated } V_{RRM}$                          |      | 3.0  | mA    |
| $I_R$  | $V_R=\text{Rated } V_{RRM}, T_A=100^{\circ}\text{C}$ |      | 20   | mA    |
| $V_F$  | $I_F=5.0\text{A (CMSH5-20)}$                         | 0.48 | 0.55 | V     |
| $V_F$  | $I_F=5.0\text{A (CMSH5-40)}$                         | 0.49 | 0.55 | V     |
| $V_F$  | $I_F=5.0\text{A (CMSH5-60)}$                         | 0.62 | 0.75 | V     |
| $V_F$  | $I_F=5.0\text{A (CMSH5-100)}$                        | 0.79 | 0.85 | V     |
| $C_J$  | $V_R=0.1\text{V}, f=1.0\text{MHz (CMSH5-20)}$        | 724  |      | pF    |
| $C_J$  | $V_R=0.1\text{V}, f=1.0\text{MHz (CMSH5-40)}$        | 708  |      | pF    |
| $C_J$  | $V_R=0.1\text{V}, f=1.0\text{MHz (CMSH5-60)}$        | 525  |      | pF    |
| $C_J$  | $V_R=0.1\text{V}, f=1.0\text{MHz (CMSH5-100)}$       | 476  |      | pF    |

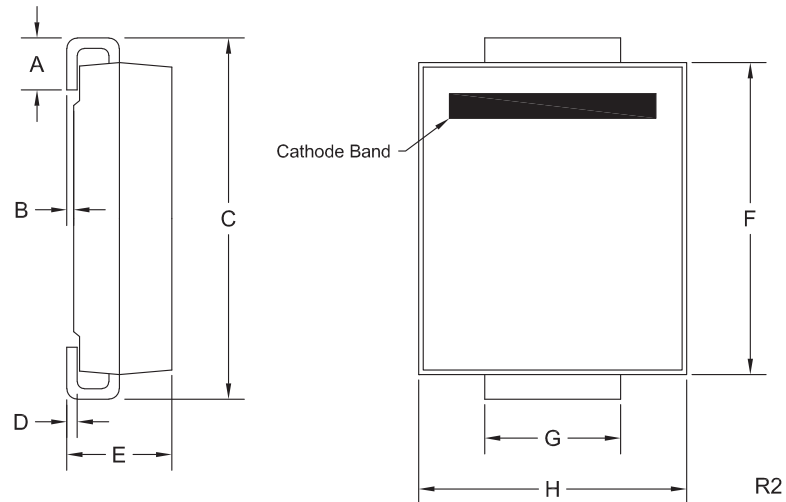
R6 (22-December 2015)

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# **SMC CASE - MECHANICAL OUTLINE**



| DEVICE    | MARKING CODE |
|-----------|--------------|
| CMSH5-20  | CS520        |
| CMSH5-40  | CS540        |
| CMSH5-60  | CS560        |
| CMSH5-100 | CS5100       |

| SYMBOL | INCHES |       | MILLIMETERS |      |
|--------|--------|-------|-------------|------|
|        | MIN    | MAX   | MIN         | MAX  |
| A      | 0.030  | 0.060 | 0.76        | 1.52 |
| B      | 0.002  | 0.008 | 0.05        | 0.20 |
| C      | 0.305  | 0.320 | 7.75        | 8.13 |
| D      | 0.006  | 0.012 | 0.15        | 0.31 |
| E      | 0.079  | 0.103 | 2.00        | 2.62 |
| F      | 0.260  | 0.280 | 6.60        | 7.11 |
| G      | 0.108  | 0.128 | 2.75        | 3.25 |
| H      | 0.220  | 0.245 | 5.59        | 6.22 |

SMC (REV: R2)

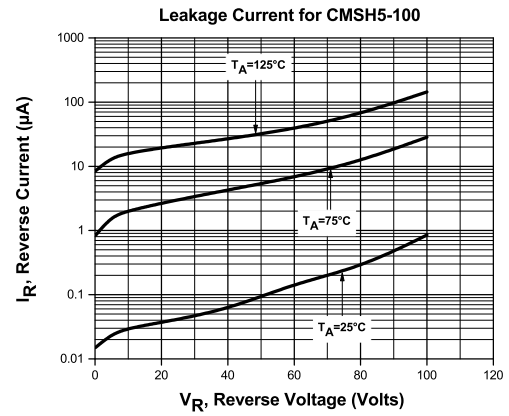
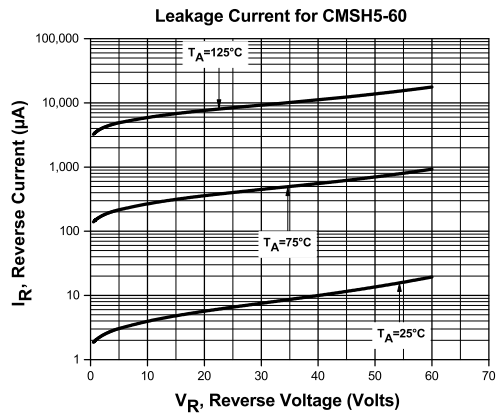
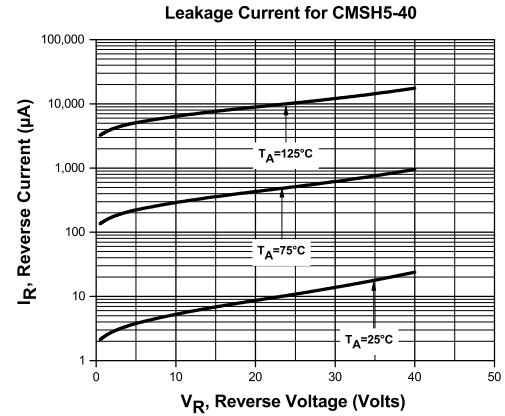
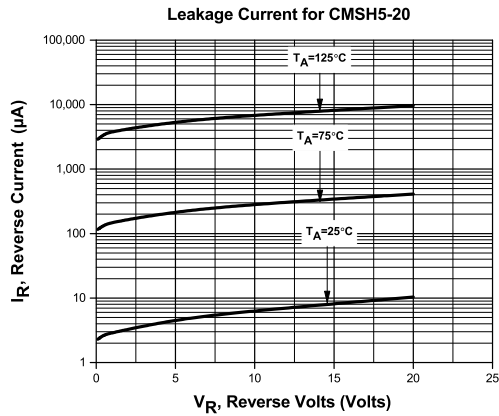
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## TYPICAL ELECTRICAL CHARACTERISTICS



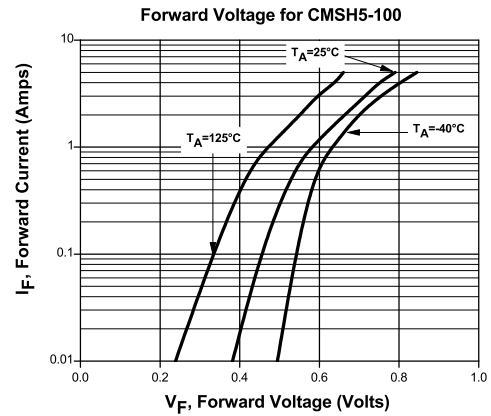
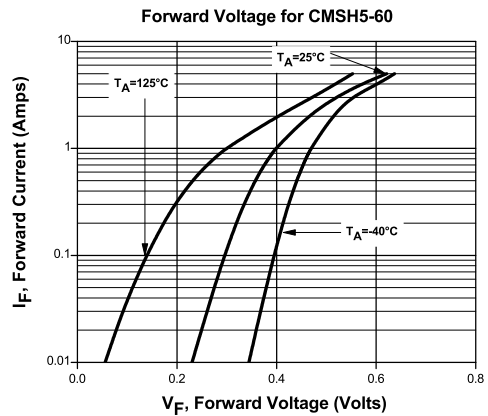
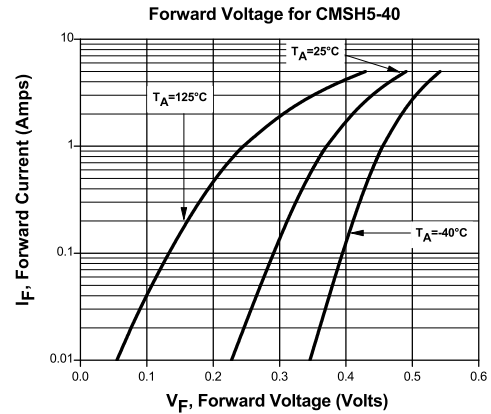
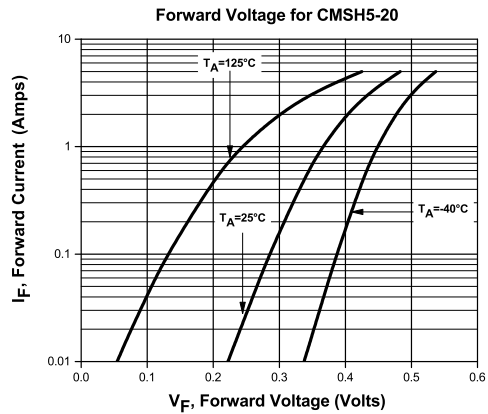
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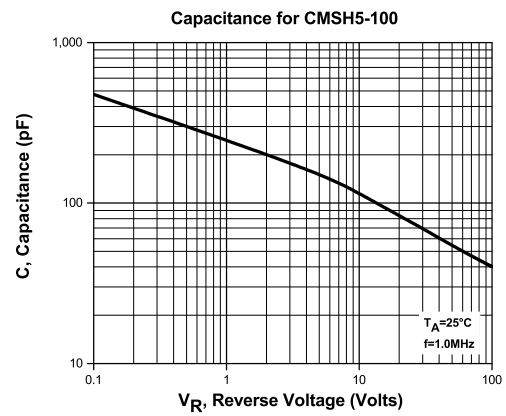
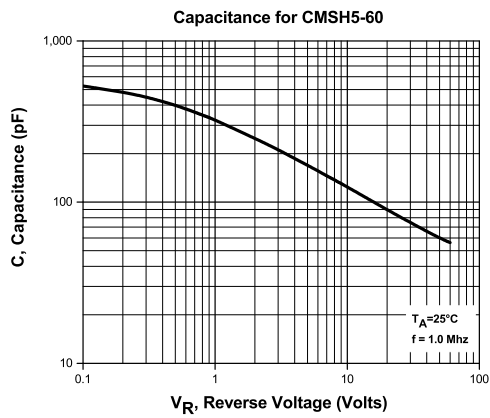
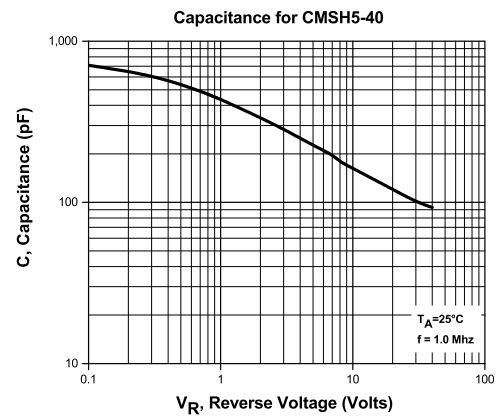
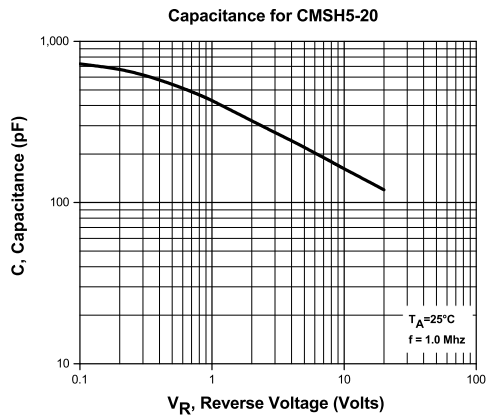
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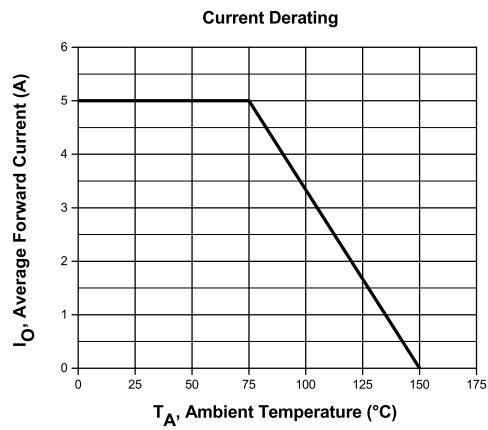
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## TYPICAL ELECTRICAL CHARACTERISTICS



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## 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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### CONTACT US

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