

CMSH3-20MA CMSH3-60MA  
CMSH3-40MA CMSH3-100MA

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



**SMA CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMSH3-20MA series 3.0 Amp surface mount silicon Schottky rectifier is a well constructed, highly reliable component designed for use in all types of commercial, industrial, entertainment, computer, and automotive applications.

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

**FEATURES:**

- High current capability
- Flammability classification UL94V-0
- High reliability

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

|                                                      | SYMBOL         | CMSH3<br>-20MA | CMSH3<br>-40MA | CMSH3<br>-60MA | CMSH3<br>-100MA | 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 ( $T_L=75^{\circ}\text{C}$ ) | $I_O$          |                |                | 3.0            |                 | A                    |
| Peak Forward Surge Current, $t_p=8.3\text{ms}$       | $I_{FSM}$      |                |                | 80             |                 | A                    |
| Operating and Storage Junction Temperature           | $T_J, T_{stg}$ |                | -65 to +150    |                |                 | $^{\circ}\text{C}$   |
| Thermal Resistance                                   | $\Theta_{JL}$  |                | 30             |                |                 | $^{\circ}\text{C/W}$ |

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

| SYMBOL | TEST CONDITIONS                                      | TYP  | MAX  | UNITS         |
|--------|------------------------------------------------------|------|------|---------------|
| $I_R$  | $V_R=\text{Rated } V_{RRM}$                          |      | 500  | $\mu\text{A}$ |
| $I_R$  | $V_R=\text{Rated } V_{RRM}, T_A=100^{\circ}\text{C}$ |      | 20   | mA            |
| $V_F$  | $I_F=3.0\text{A}$ (CMSH3-20MA)                       | 0.46 | 0.50 | V             |
| $V_F$  | $I_F=3.0\text{A}$ (CMSH3-40MA)                       | 0.47 | 0.50 | V             |
| $V_F$  | $I_F=3.0\text{A}$ (CMSH3-60MA)                       | 0.56 | 0.70 | V             |
| $V_F$  | $I_F=3.0\text{A}$ (CMSH3-100MA)                      | 0.76 | 0.85 | V             |
| $C_J$  | $V_R=4.0\text{V}, f=1.0\text{MHz}$ (CMSH3-20MA)      | 174  |      | pF            |
| $C_J$  | $V_R=4.0\text{V}, f=1.0\text{MHz}$ (CMSH3-40MA)      | 160  |      | pF            |
| $C_J$  | $V_R=4.0\text{V}, f=1.0\text{MHz}$ (CMSH3-60MA)      | 121  |      | pF            |
| $C_J$  | $V_R=4.0\text{V}, f=1.0\text{MHz}$ (CMSH3-100MA)     | 83   |      | pF            |

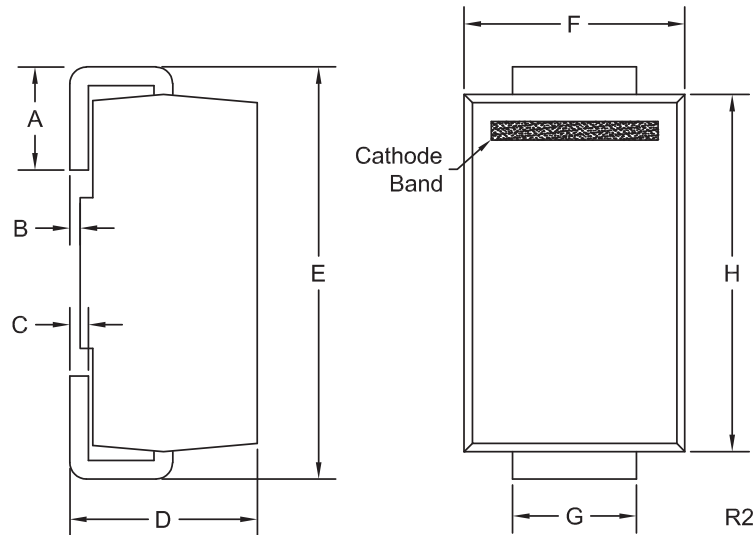
R4 (3-February 2016)

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# SMA CASE - MECHANICAL OUTLINE



| DEVICE      | MARKING CODE |
|-------------|--------------|
| CMSH3-20MA  | CS320MA      |
| CMSH3-40MA  | CS340MA      |
| CMSH3-60MA  | CS360MA      |
| CMSH3-100MA | CS3100MA     |

| SYMBOL | INCHES |       | MILLIMETERS |      |
|--------|--------|-------|-------------|------|
|        | MIN    | MAX   | MIN         | MAX  |
| A      | 0.030  | 0.060 | 0.76        | 1.52 |
| B      | 0.004  | 0.008 | 0.10        | 0.20 |
| C      | 0.006  | 0.012 | 0.15        | 0.30 |
| D      | 0.078  | 0.103 | 1.98        | 2.62 |
| E      | 0.188  | 0.220 | 4.78        | 5.59 |
| F      | 0.090  | 0.115 | 2.29        | 2.92 |
| G      | 0.050  | 0.070 | 1.27        | 1.78 |
| H      | 0.157  | 0.181 | 3.99        | 4.60 |

SMA (REV: R2)

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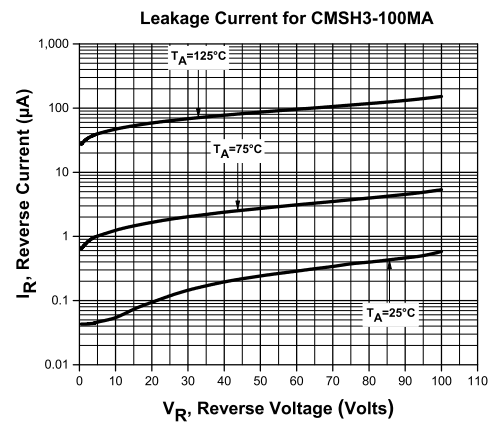
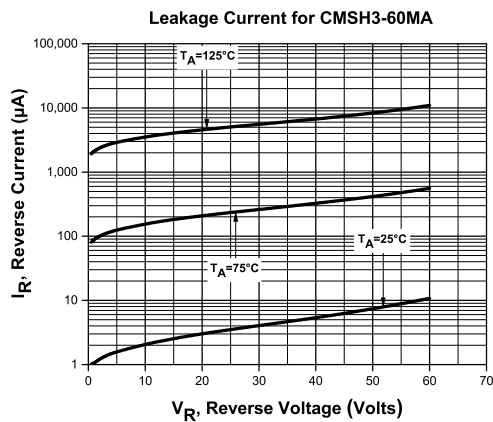
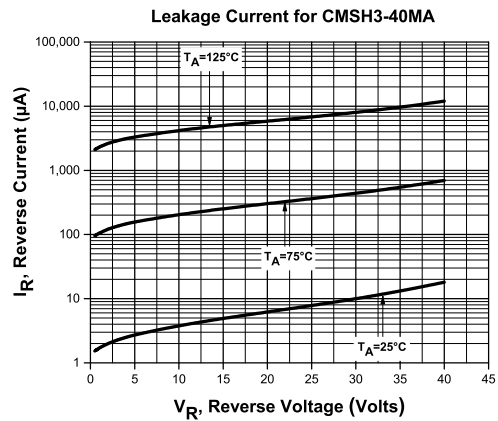
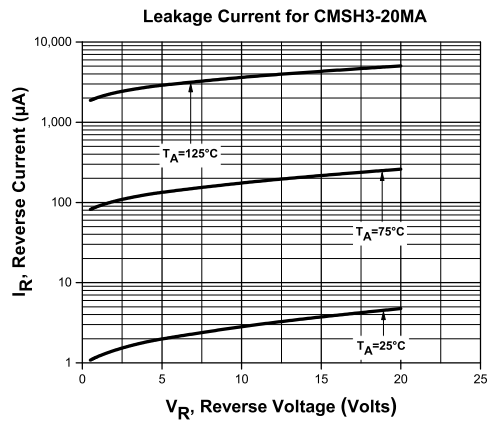
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## TYPICAL ELECTRICAL CHARACTERISTICS



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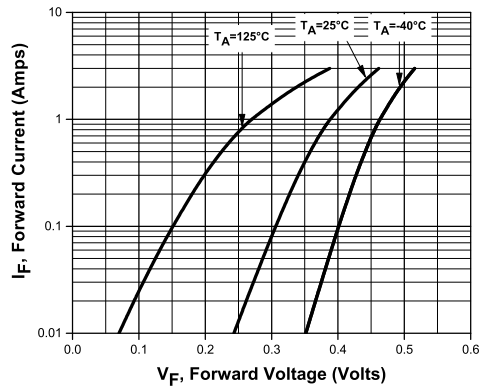
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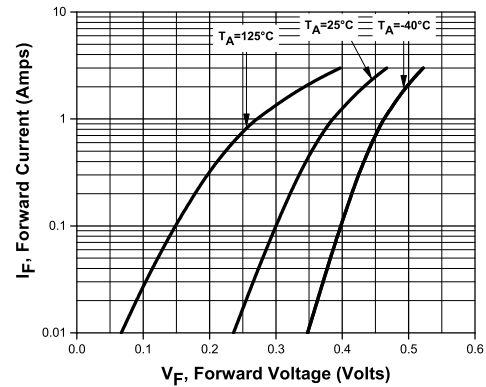


## TYPICAL ELECTRICAL CHARACTERISTICS

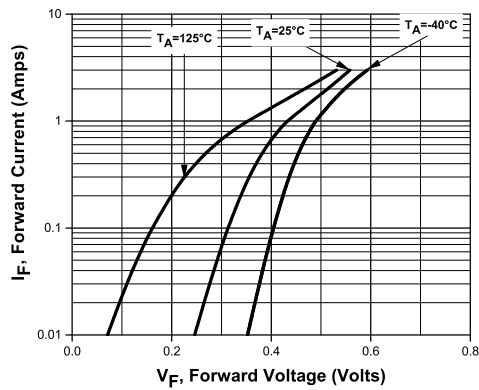
Forward Voltage for CMSH3-20MA



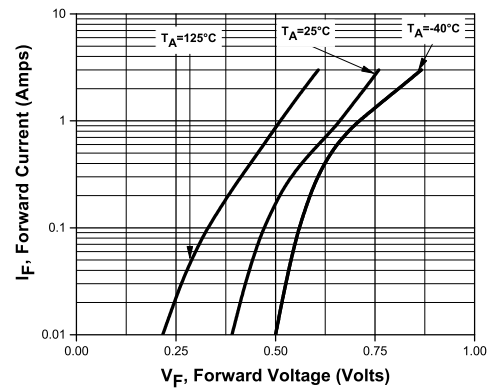
Forward Voltage for CMSH3-40MA



Forward Voltage for CMSH3-60MA



Forward Voltage for CMSH3-100MA



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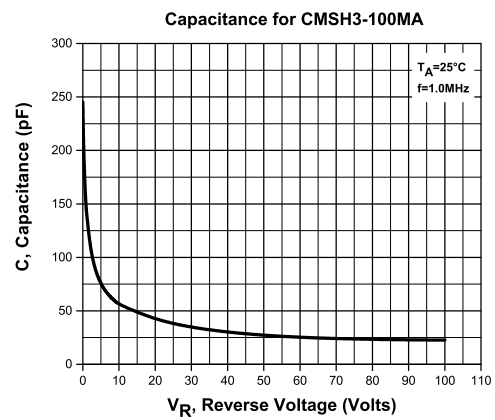
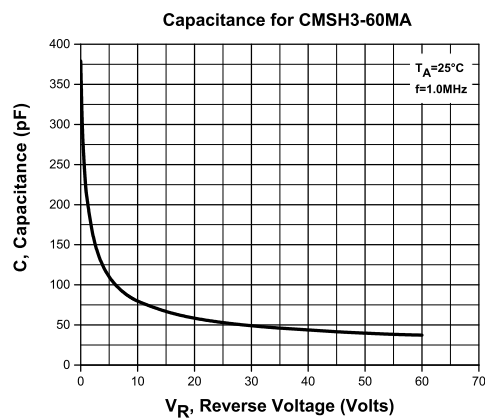
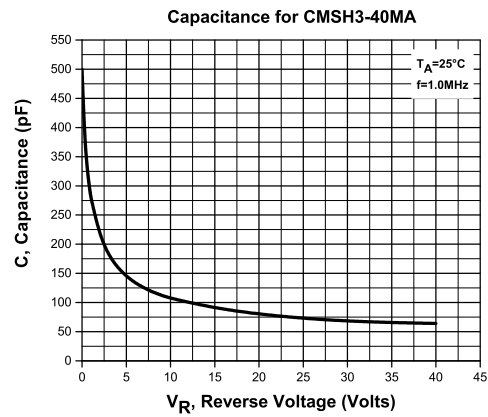
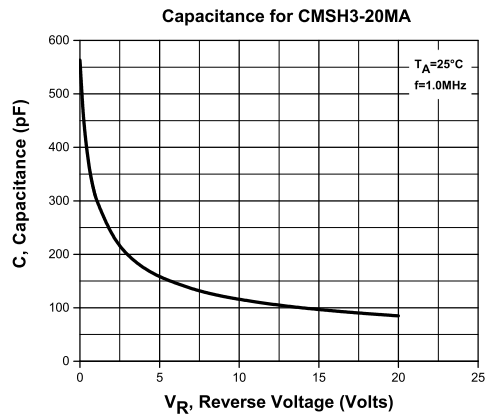
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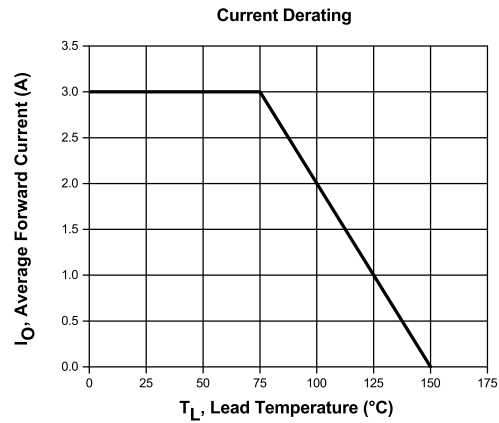
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## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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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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### 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

#### Corporate Headquarters & Customer Support Team

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Hauppauge, NY 11788 USA  
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