

CMSH2-20M CMSH2-60M  
CMSH2-40M CMSH2-100M

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



**SMA CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMSH2-20M series 2.0 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         | CMSH2<br>-20M | CMSH2<br>-40M | CMSH2<br>-60M | CMSH2<br>-100M | 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 ( $T_L=75^\circ\text{C}$ ) | $I_O$          |               |               | 2.0           |                | A                  |
| Peak Forward Surge Current, $t_p=8.3\text{ms}$     | $I_{FSM}$      |               |               | 50            |                | A                  |
| Power Dissipation                                  | $P_D$          |               |               | 1.4           |                | W                  |
| Operating and Storage Junction Temperature         | $T_J, T_{stg}$ |               | -65 to +150   |               |                | $^\circ\text{C}$   |
| Thermal Resistance                                 | $\theta_{JA}$  |               |               | 89            |                | $^\circ\text{C/W}$ |
| Thermal Resistance                                 | $\theta_{JL}$  |               |               | 30            |                | $^\circ\text{C/W}$ |

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

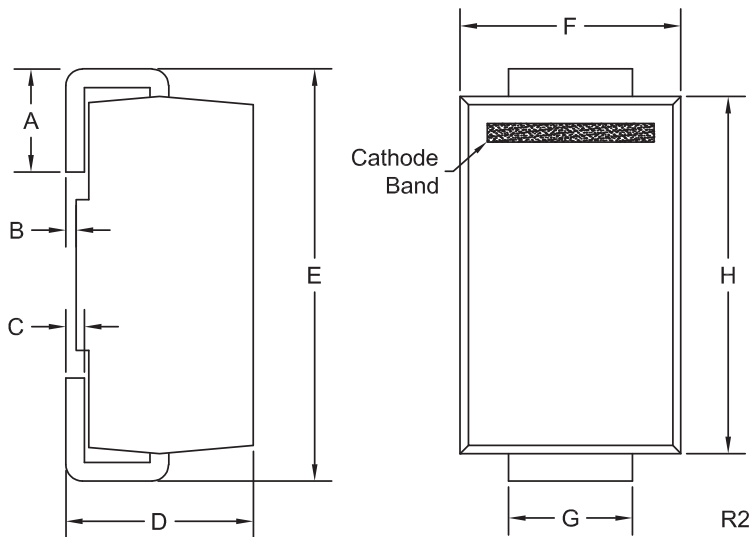
| SYMBOL | TEST CONDITIONS                                    | TYP  | MAX  | UNITS |
|--------|----------------------------------------------------|------|------|-------|
| $I_R$  | $V_R=\text{Rated } V_{RRM}$                        |      | 0.50 | mA    |
| $I_R$  | $V_R=\text{Rated } V_{RRM}, T_A=100^\circ\text{C}$ |      | 20   | mA    |
| $V_F$  | $I_F=2.0\text{A}$ (CMSH2-20M)                      | 0.44 | 0.55 | V     |
| $V_F$  | $I_F=2.0\text{A}$ (CMSH2-40M)                      | 0.47 | 0.55 | V     |
| $V_F$  | $I_F=2.0\text{A}$ (CMSH2-60M)                      | 0.53 | 0.70 | V     |
| $V_F$  | $I_F=2.0\text{A}$ (CMSH2-100M)                     | 0.76 | 0.85 | V     |
| $C_J$  | $V_R=4.0\text{V}, f=1.0\text{MHz}$ (CMSH2-20M)     | 139  |      | pF    |
| $C_J$  | $V_R=4.0\text{V}, f=1.0\text{MHz}$ (CMSH2-40M)     | 101  |      | pF    |
| $C_J$  | $V_R=4.0\text{V}, f=1.0\text{MHz}$ (CMSH2-60M)     | 94   |      | pF    |
| $C_J$  | $V_R=4.0\text{V}, f=1.0\text{MHz}$ (CMSH2-100M)    | 74   |      | pF    |

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|                                                                           |            |
|---------------------------------------------------------------------------|------------|
| CMSH2-20M                                                                 | CMSH2-60M  |
| CMSH2-40M                                                                 | CMSH2-100M |
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SMA CASE - MECHANICAL OUTLINE



| DEVICE     | MARKING CODE |
|------------|--------------|
| CMSH2-20M  | CS220M       |
| CMSH2-40M  | CS240M       |
| CMSH2-60M  | CS260M       |
| CMSH2-100M | CS2100M      |

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

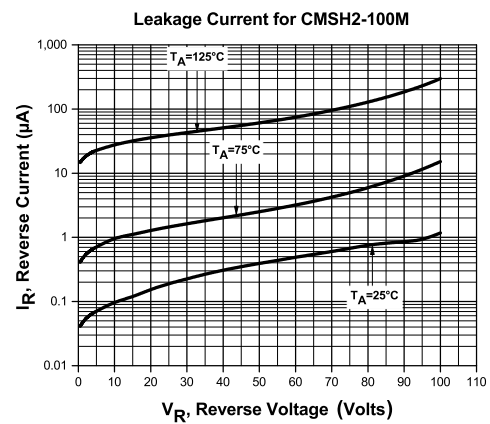
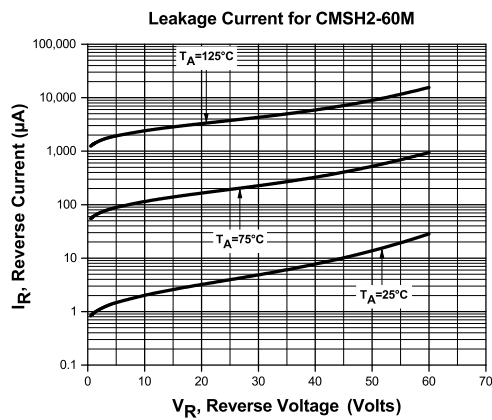
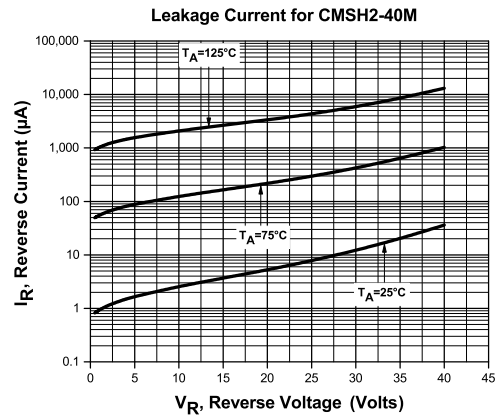
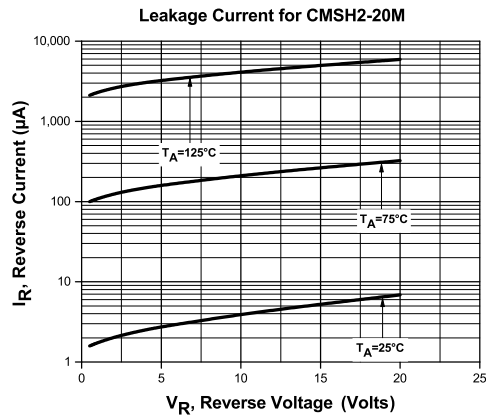
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## TYPICAL ELECTRICAL CHARACTERISTICS



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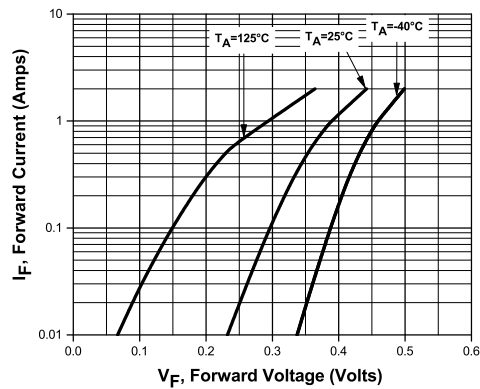
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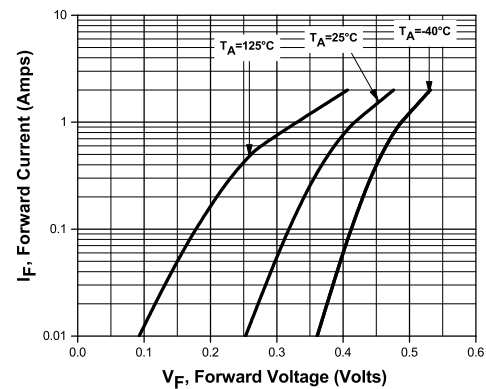


## TYPICAL ELECTRICAL CHARACTERISTICS

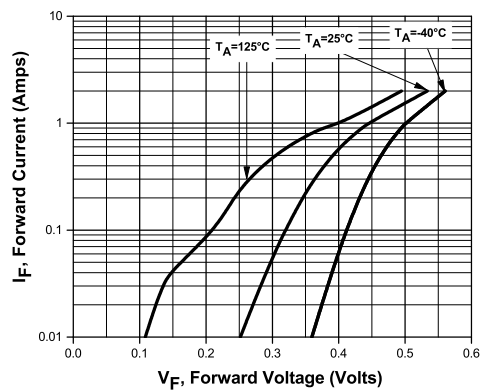
Forward Voltage for CMSH2-20M



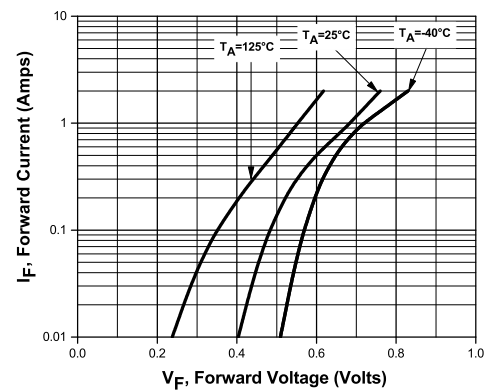
Forward Voltage for CMSH2-40M



Forward Voltage for CMSH2-60M



Forward Voltage for CMSH2-100M



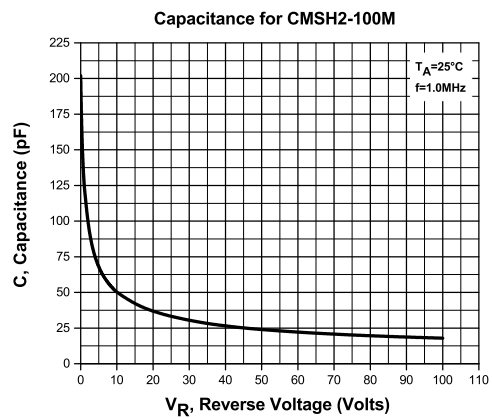
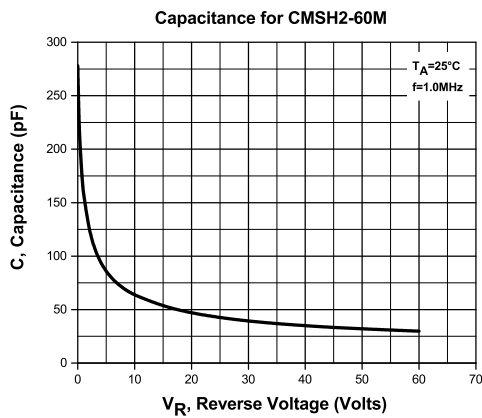
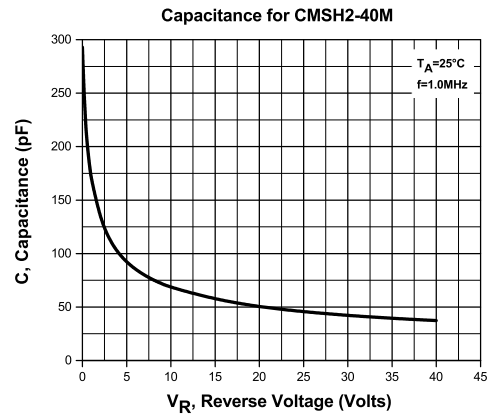
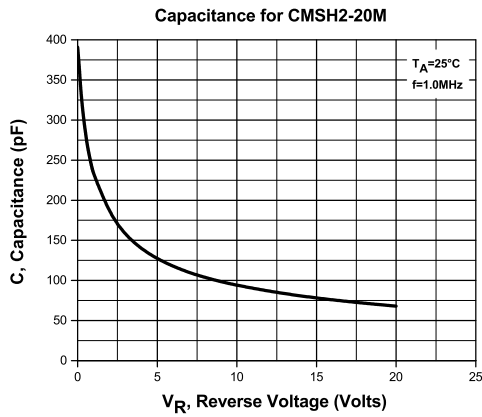
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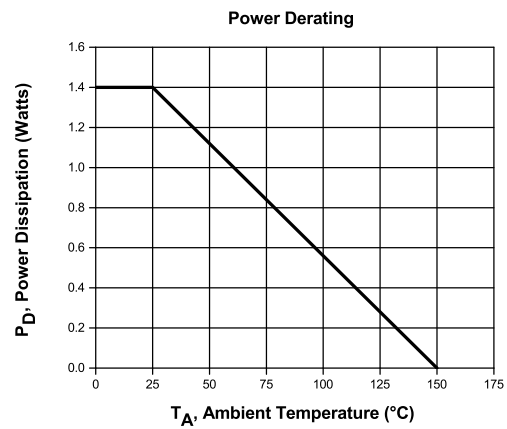
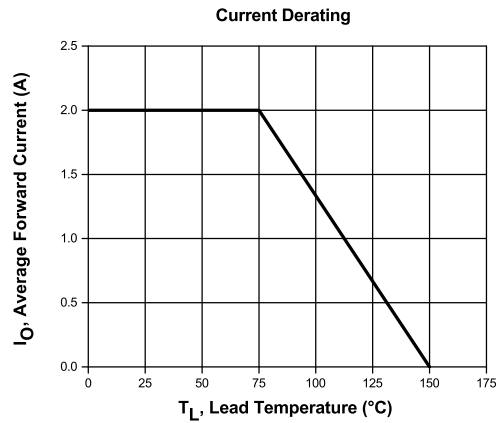
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## TYPICAL ELECTRICAL CHARACTERISTICS



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

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