

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

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



SMA CASE



[www.centralesemi.com](http://www.centralesemi.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 <sub>A</sub> =25°C unless otherwise noted) |                                   | CMSH2<br>-20M | CMSH2<br>-40M | CMSH2<br>-60M | CMSH2<br>-100M | UNITS |
|--|-----------------------------------|---------------|---------------|---------------|----------------|-------|
| Peak Repetitive Reverse Voltage                                | V <sub>RRM</sub>                  | 20            | 40            | 60            | 100            | V     |
| DC Blocking Voltage  | V <sub>R</sub>                    | 20            | 40            | 60            | 100            | V     |
| RMS Reverse Voltage  | V <sub>R(RMS)</sub>               | 14            | 28            | 42            | 71             | V     |
| Average Forward Current (T <sub>L</sub> =75°C)                 | I <sub>O</sub>                    |               |               | 2.0           |                | A     |
| Peak Forward Surge Current, t <sub>p</sub> =8.3ms              | I <sub>FSM</sub>                  |               |               | 50            |                | A     |
| Power Dissipation  | P <sub>D</sub>                    |               |               | 1.4           |                | W     |
| Operating and Storage Junction Temperature                     | T <sub>J</sub> , T <sub>stg</sub> |               |               | -65 to +150   |                | °C    |
| Thermal Resistance   | θ <sub>JA</sub>                   |               |               | 89            |                | °C/W  |
| Thermal Resistance   | θ <sub>JL</sub>                   |               |               | 30            |                | °C/W  |

**ELECTRICAL CHARACTERISTICS: (T<sub>A</sub>=25°C unless otherwise noted)**

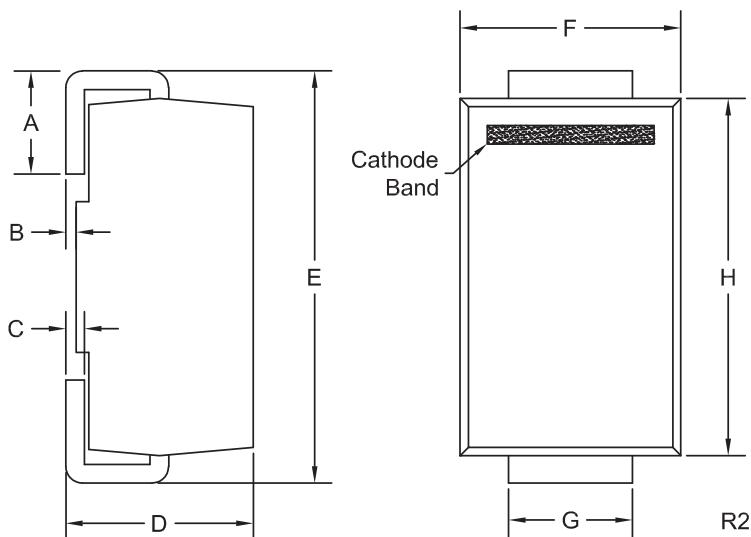
| SYMBOL         | TEST CONDITIONS  | TYP  | MAX  | UNITS |
|----------------|--|------|------|-------|
| I <sub>R</sub> | V <sub>R</sub> =Rated V <sub>RRM</sub>                         |      | 0.50 | mA    |
| I <sub>R</sub> | V <sub>R</sub> =Rated V <sub>RRM</sub> , T <sub>A</sub> =100°C |      | 20   | mA    |
| V <sub>F</sub> | I <sub>F</sub> =2.0A (CMSH2-20M)                               | 0.44 | 0.55 | V     |
| V <sub>F</sub> | I <sub>F</sub> =2.0A (CMSH2-40M)                               | 0.47 | 0.55 | V     |
| V <sub>F</sub> | I <sub>F</sub> =2.0A (CMSH2-60M)                               | 0.53 | 0.70 | V     |
| V <sub>F</sub> | I <sub>F</sub> =2.0A (CMSH2-100M)                              | 0.76 | 0.85 | V     |
| C <sub>J</sub> | V <sub>R</sub> =4.0V, f=1.0MHz (CMSH2-20M)                     | 139  |      | pF    |
| C <sub>J</sub> | V <sub>R</sub> =4.0V, f=1.0MHz (CMSH2-40M)                     | 101  |      | pF    |
| C <sub>J</sub> | V <sub>R</sub> =4.0V, f=1.0MHz (CMSH2-60M)                     | 94   |      | pF    |
| C <sub>J</sub> | V <sub>R</sub> =4.0V, f=1.0MHz (CMSH2-100M)                    | 74   |      | pF    |

R4 (1-December 2015)

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SMA CASE - MECHANICAL OUTLINE



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

| 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)

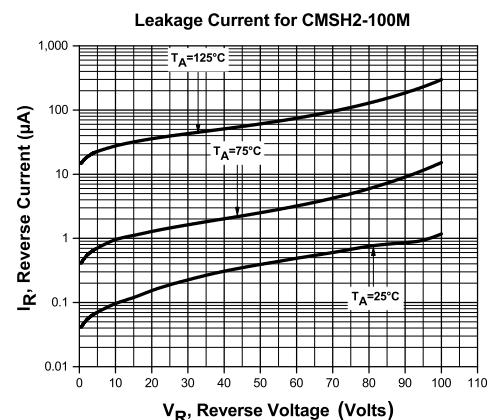
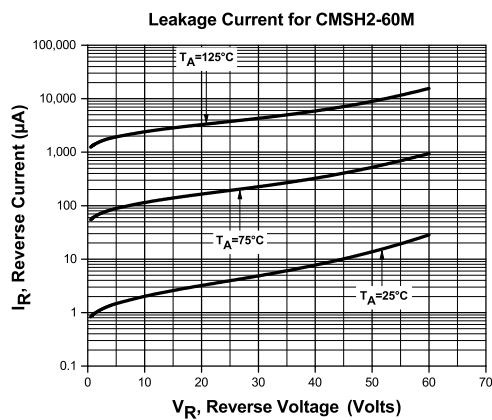
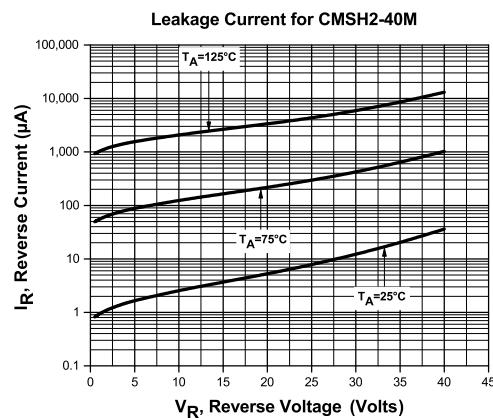
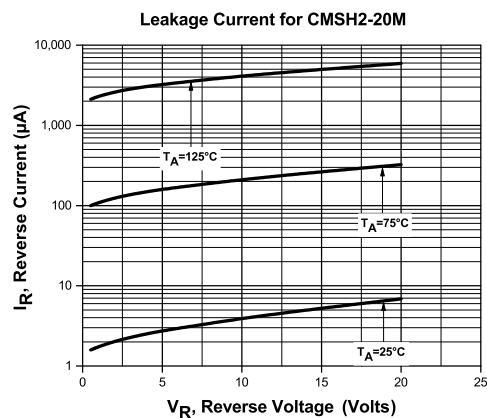
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### TYPICAL ELECTRICAL CHARACTERISTICS



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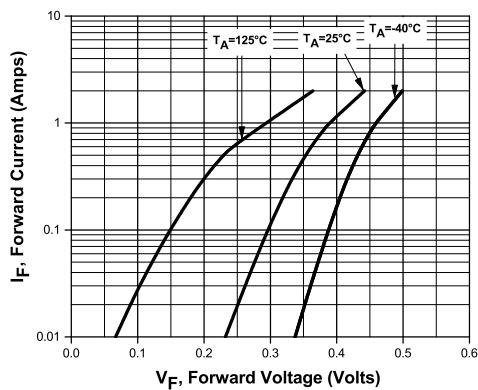
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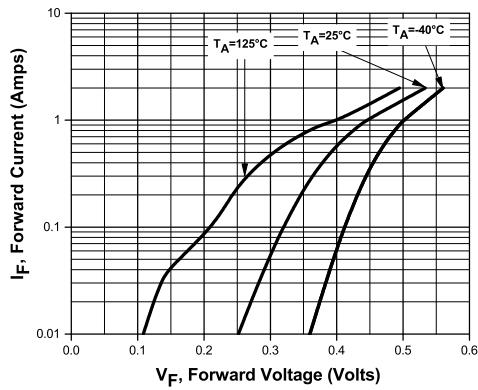


### TYPICAL ELECTRICAL CHARACTERISTICS

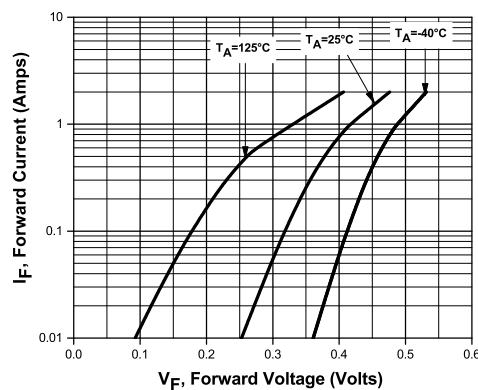
Forward Voltage for CMSH2-20M



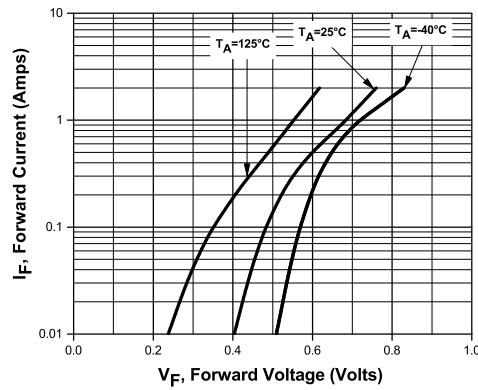
Forward Voltage for CMSH2-60M



Forward Voltage for CMSH2-40M



Forward Voltage for CMSH2-100M



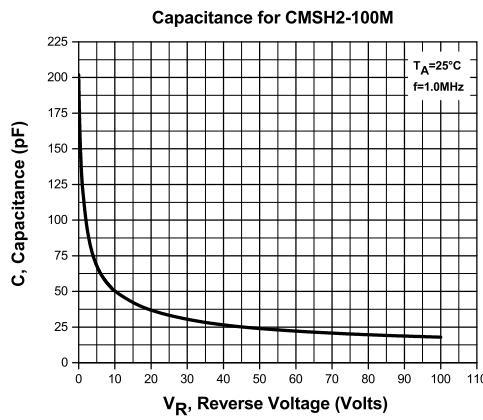
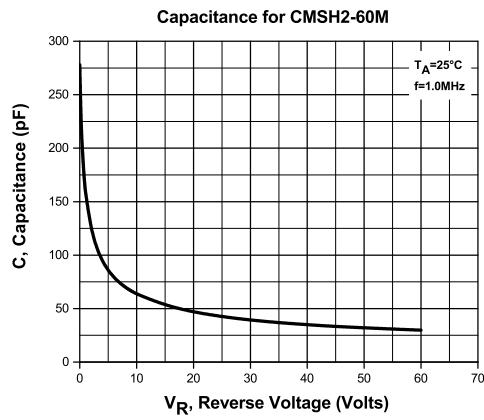
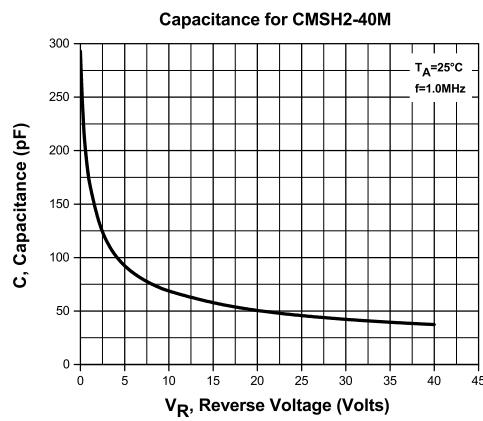
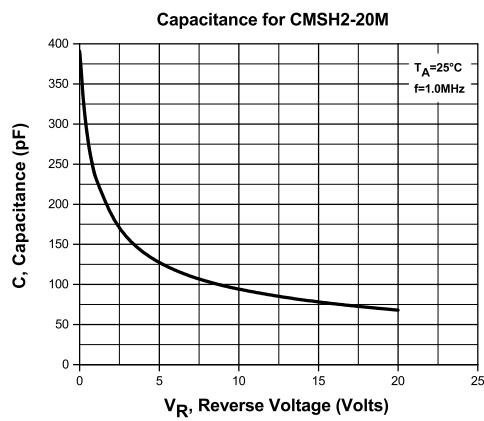
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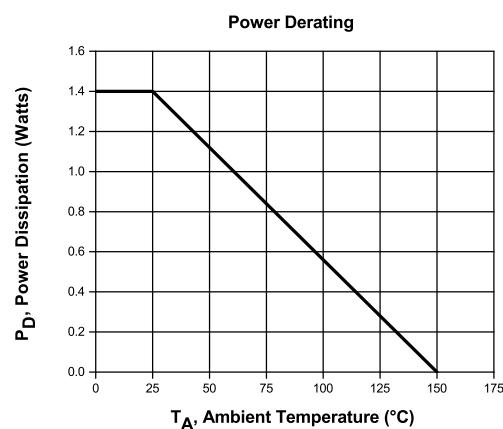
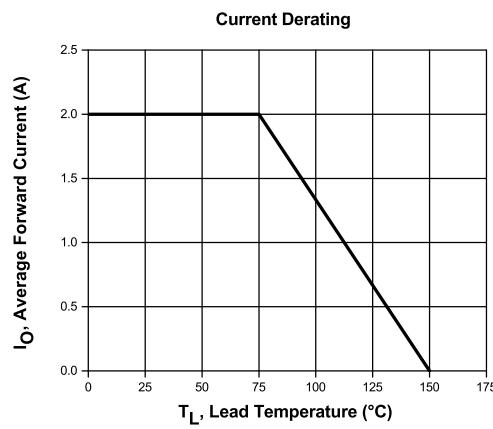
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## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

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