

CMSH1-20M CMSH1-60M
CMSH1-40M CMSH1-100M

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



SMA CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMSH1-20M series 1.0 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 reliability
- Special selections available

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

| | SYMBOL | CMSH1 -20M | CMSH1 -40M | CMSH1 -60M | CMSH1 -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 | 70 | V |
| Average Forward Current ($T_L=75^\circ\text{C}$) | I_O | 1.0 | 1.0 | | | A |
| Average Forward Current ($T_L=100^\circ\text{C}$) | I_O | | | 1.0 | 1.0 | A |
| Peak Forward Surge Current, $t_p=8.3\text{ms}$ | I_{FSM} | | | 30 | | 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 | θ_{JA} | | | 89 | | $^\circ\text{C/W}$ |
| Thermal Resistance | θ_{JL} | | | 30 | | $^\circ\text{C/W}$ |

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

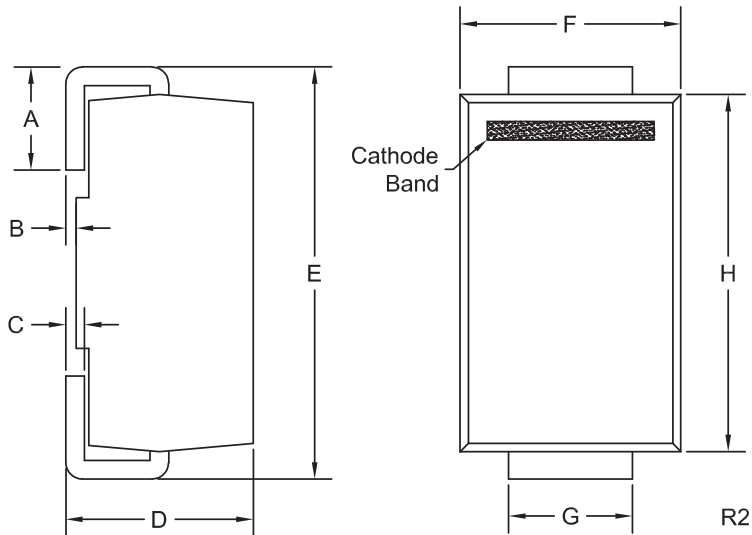
| SYMBOL | TEST CONDITIONS | TYP | MAX | UNITS |
|--------|--|------|------|-------|
| I_R | V_R =Rated V_{RRM} | | 0.50 | mA |
| I_R | V_R =Rated V_{RRM} , $T_A=100^\circ\text{C}$ | | 10 | mA |
| V_F | $I_F=1.0\text{A}$ (CMSH1-20M) | 0.47 | 0.50 | V |
| V_F | $I_F=1.0\text{A}$ (CMSH1-40M) | 0.48 | 0.50 | V |
| V_F | $I_F=1.0\text{A}$ (CMSH1-60M) | 0.60 | 0.70 | V |
| V_F | $I_F=1.0\text{A}$ (CMSH1-100M) | 0.76 | 0.85 | V |
| C_J | $V_R=4.0\text{V}$, $f=1.0\text{MHz}$ (CMSH1-20M) | 42 | | pF |
| C_J | $V_R=4.0\text{V}$, $f=1.0\text{MHz}$ (CMSH1-40M) | 55 | | pF |
| C_J | $V_R=4.0\text{V}$, $f=1.0\text{MHz}$ (CMSH1-60M) | 43 | | pF |
| C_J | $V_R=4.0\text{V}$, $f=1.0\text{MHz}$ (CMSH1-100M) | 29 | | pF |

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SMA CASE - MECHANICAL OUTLINE



| DEVICE | MARKING CODE |
|------------|--------------|
| CMSH1-20M | CS20M |
| CMSH1-40M | CS40M |
| CMSH1-60M | CS60M |
| CMSH1-100M | CS100M |

| 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)

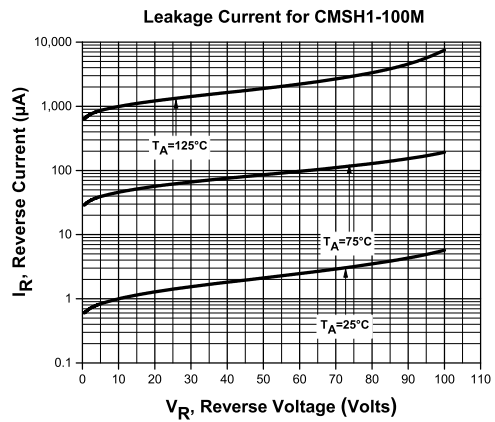
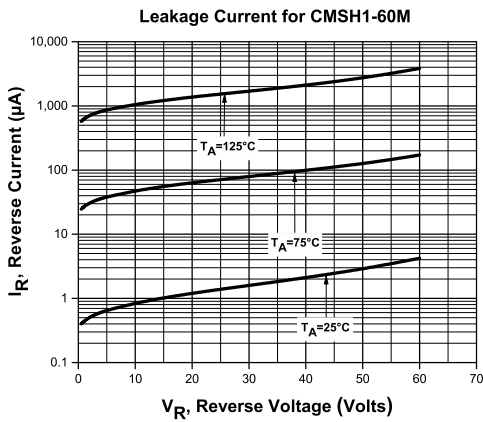
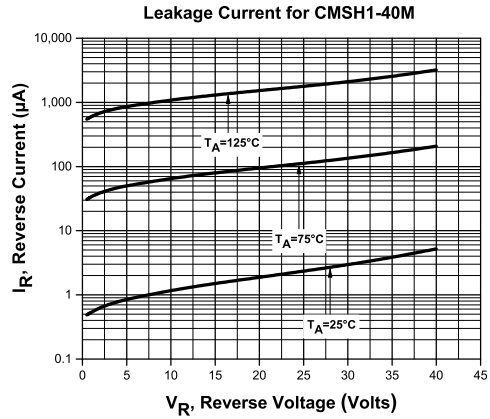
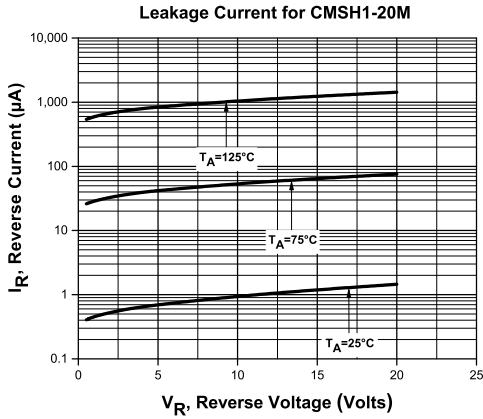
R7 (24-November 2015)

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TYPICAL ELECTRICAL CHARACTERISTICS



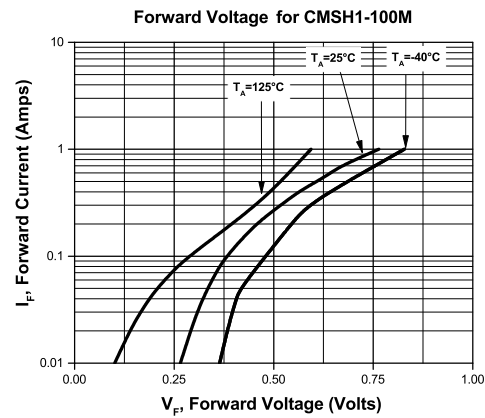
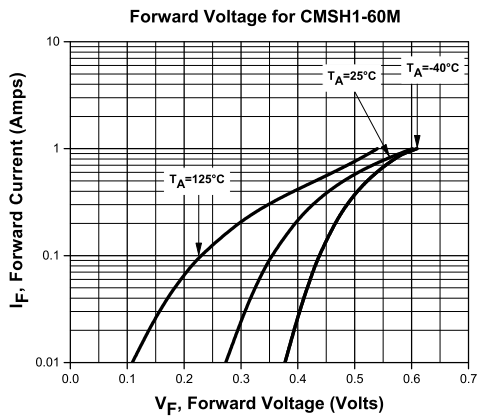
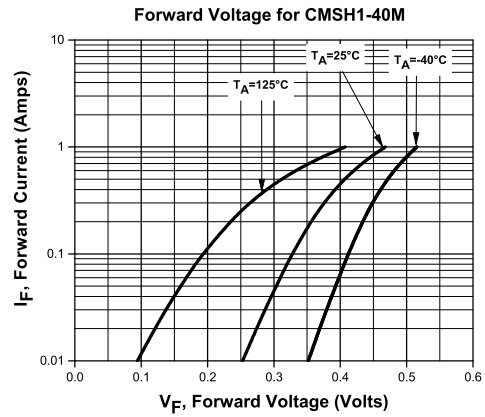
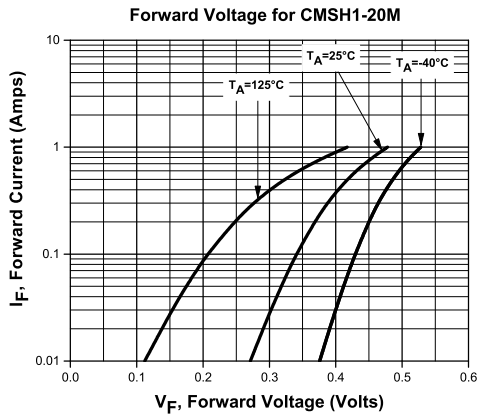
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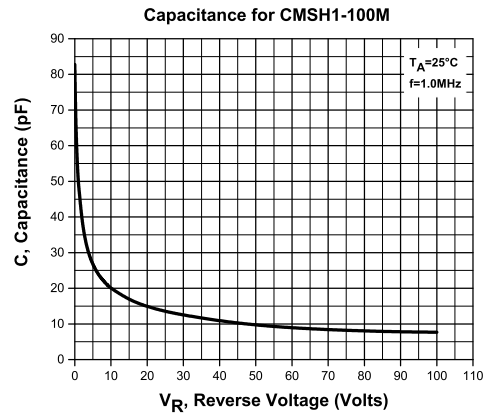
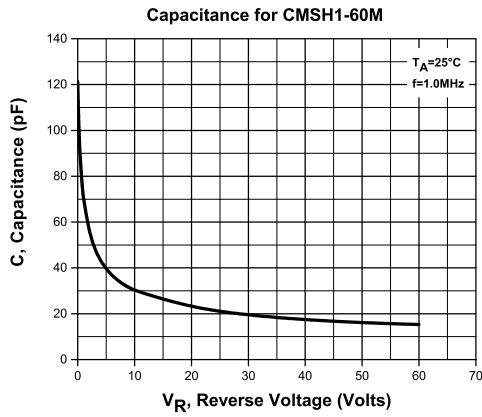
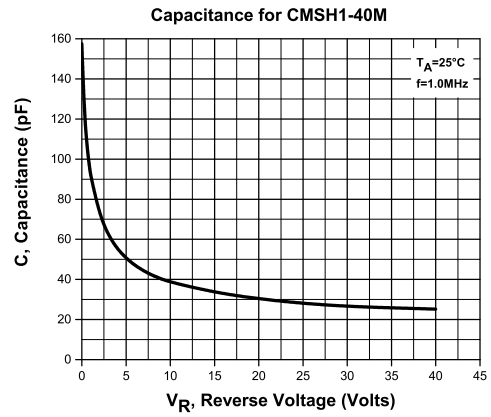
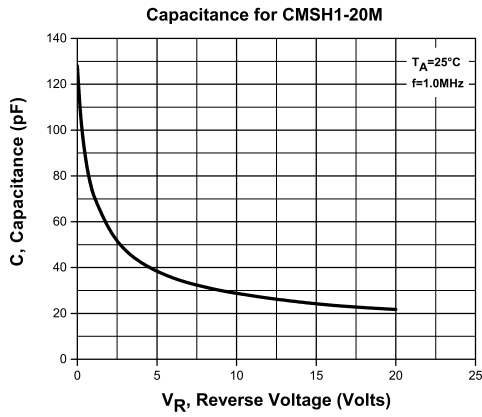
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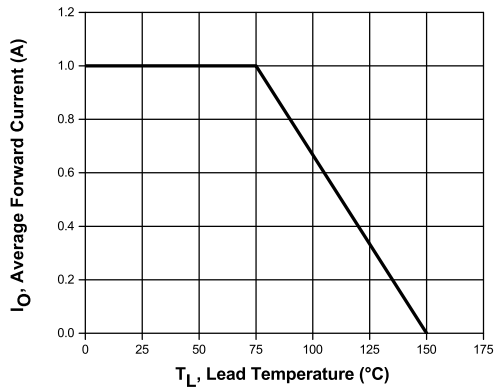
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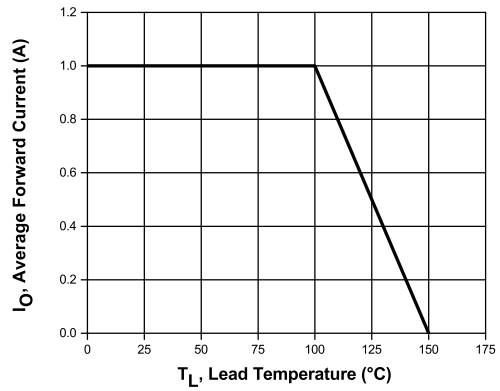


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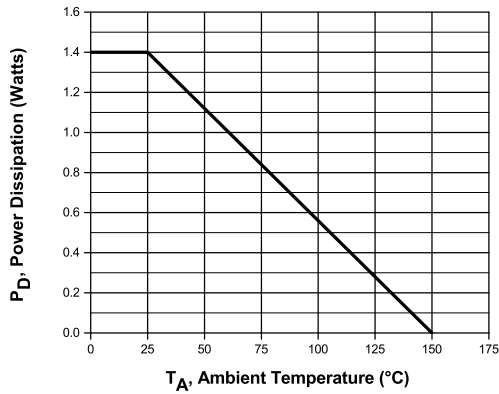
Current Derating for CMSH1-20M & CMSH1-40M



Current Derating for CMSH1-60M & CMSH1-100M



Power Derating



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OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd 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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