

CMSH1-40HE CMSH1-100HE
 CMSH1-60HE CMSH1-150HE
 CMSH1-80HE CMSH1-200HE

**SURFACE MOUNT SILICON
 SCHOTTKY RECTIFIERS
 1.0 AMP, 40 THRU 200 VOLT**



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMSH1-40HE series 1.0 Amp surface mount silicon Schottky rectifier is a highly efficient component designed for use in all types of commercial, industrial, entertainment, computer, and automotive applications.

MARKING CODE: SEE MARKING CODE TABLE ON FOLLOWING PAGE



SMA CASE

FEATURES:

- High reliability
- High efficiency Schottky rectifier
- 40V to 200V range
- Low leakage current
- Low V_F

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

| | SYMBOL | CMSH1 | | | | | | UNITS |
|--|----------------|-------------|-------|-------|--------|--------|--------|--------------------|
| | | -40HE | -60HE | -80HE | -100HE | -150HE | -200HE | |
| Peak Repetitive Reverse Voltage | V_{RRM} | 40 | 60 | 80 | 100 | 150 | 200 | V |
| DC Blocking Voltage | V_R | 40 | 60 | 80 | 100 | 150 | 200 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 28 | 42 | 56 | 70 | 105 | 140 | V |
| Average Forward Current | I_O | 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 | $V_R=\text{Rated } V_{RRM}$ | | 50 | μA |
| I_R | $V_R=\text{Rated } V_{RRM}, T_A=100^\circ\text{C}$ | | 20 | mA |
| V_F | $I_F=1.0\text{A}$ (CMSH1-40HE) | 0.69 | 0.70 | V |
| V_F | $I_F=1.0\text{A}$ (CMSH1-60HE) | 0.69 | 0.74 | V |
| V_F | $I_F=1.0\text{A}$ (CMSH1-80HE, -100HE) | 0.77 | 0.80 | V |
| V_F | $I_F=1.0\text{A}$ (CMSH1-150HE) | 0.80 | 0.90 | V |
| V_F | $I_F=1.0\text{A}$ (CMSH1-200HE) | 0.81 | 0.90 | V |
| C_J | $V_R=0, f=1.0\text{MHz}$ (CMSH1-40HE, 60HE) | 116 | | pF |
| C_J | $V_R=0, f=1.0\text{MHz}$ (CMSH1-80HE, 100HE) | 104 | | pF |
| C_J | $V_R=0, f=1.0\text{MHz}$ (CMSH1-150HE) | 86 | | pF |
| C_J | $V_R=0, f=1.0\text{MHz}$ (CMSH1-200HE) | 62.5 | | pF |

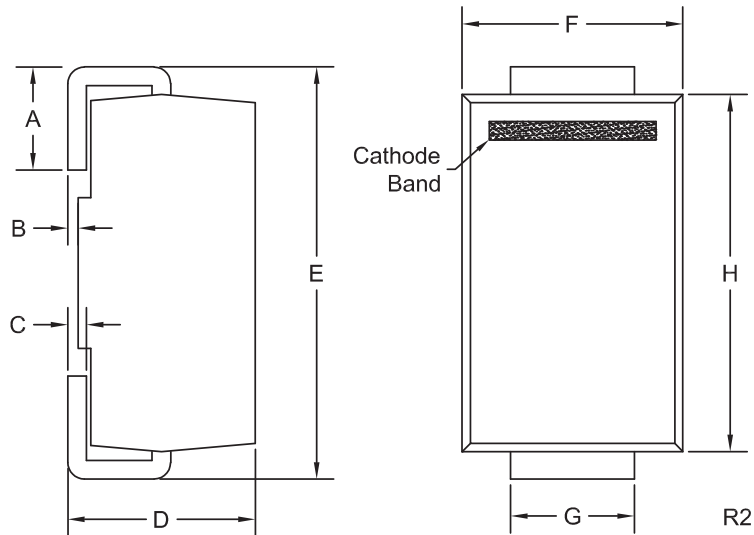
R3 (24-November 2015)

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SMA CASE - MECHANICAL OUTLINE



| DEVICE | MARKING CODE |
|-------------|--------------|
| CMSH1-40HE | CS40HE |
| CMSH1-60HE | CS60HE |
| CMSH1-80HE | CS80HE |
| CMSH1-100HE | CS100HE |
| CMSH1-150HE | CS150HE |
| CMSH1-200HE | CS200HE |

| 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)

R3 (24-November 2015)

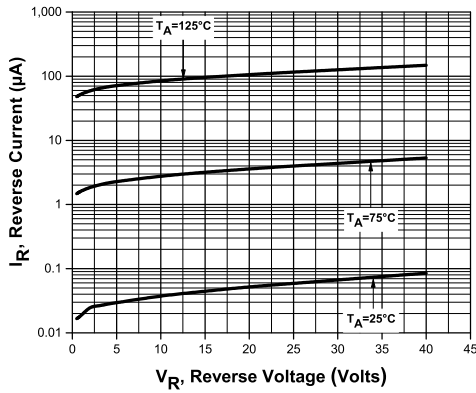
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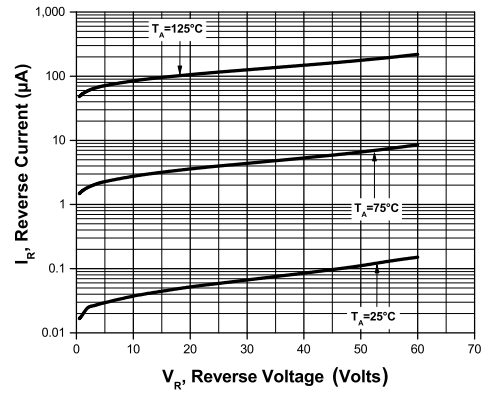
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TYPICAL ELECTRICAL CHARACTERISTICS

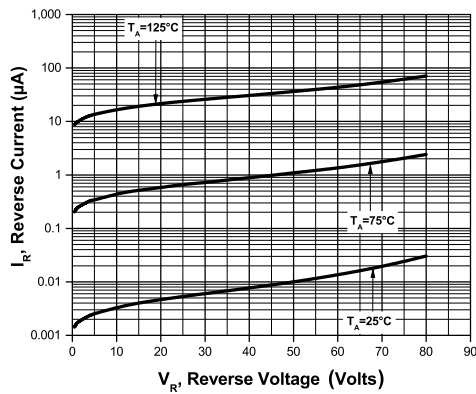
Leakage Current for CMSH1-40HE



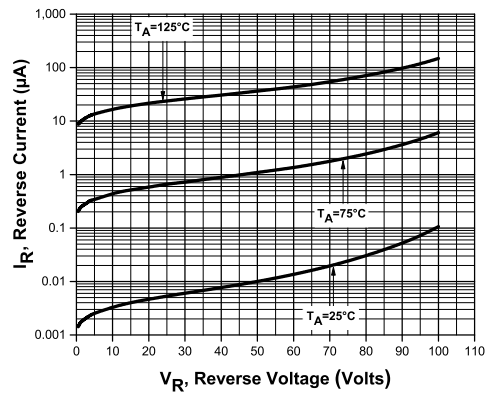
Leakage Current for CMSH1-60HE



Leakage Current for CMSH1-80HE



Leakage Current for CMSH1-100HE



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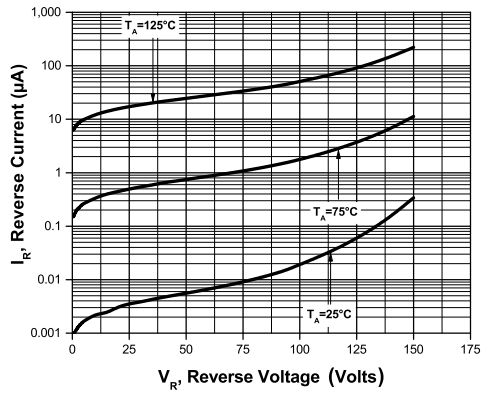
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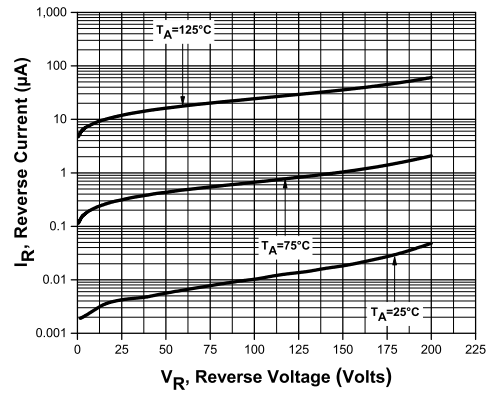
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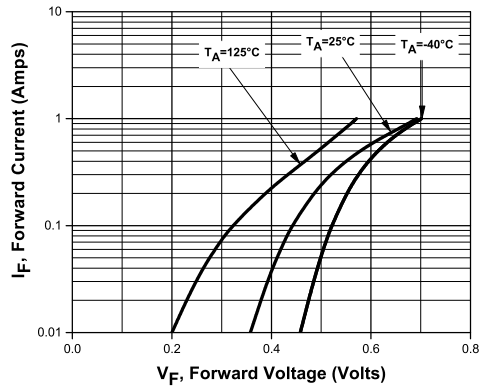
Leakage Current for CMSH1-150HE



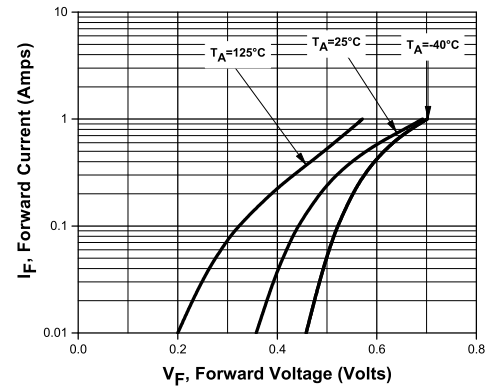
Leakage Current for CMSH1-200HE



Forward Voltage for CMSH1-40HE



Forward Voltage for CMSH1-60HE



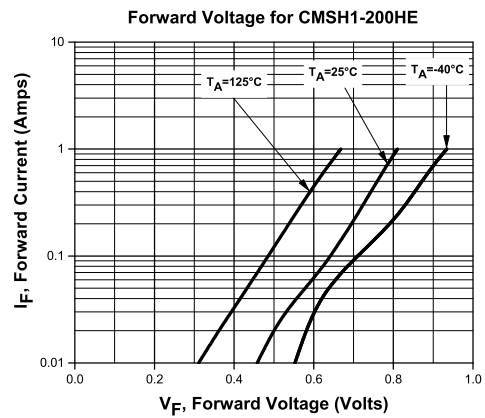
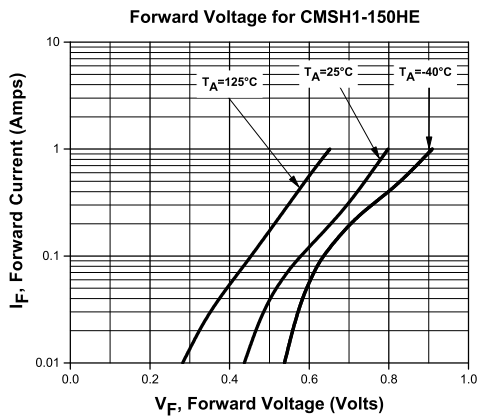
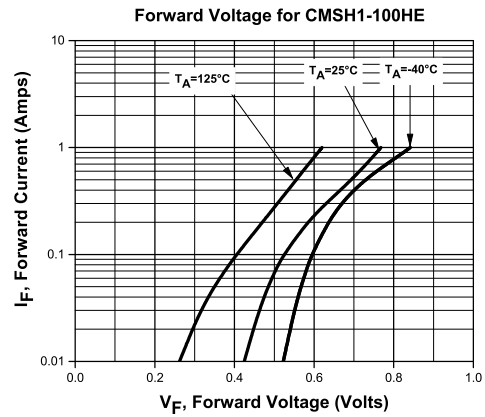
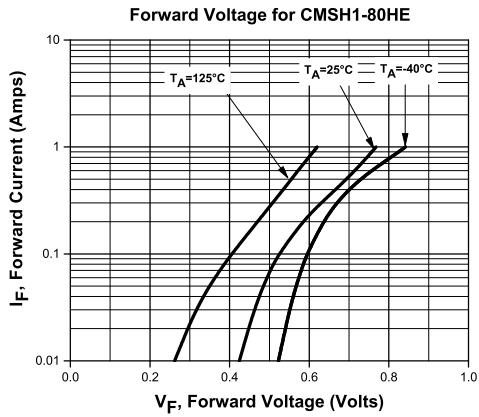
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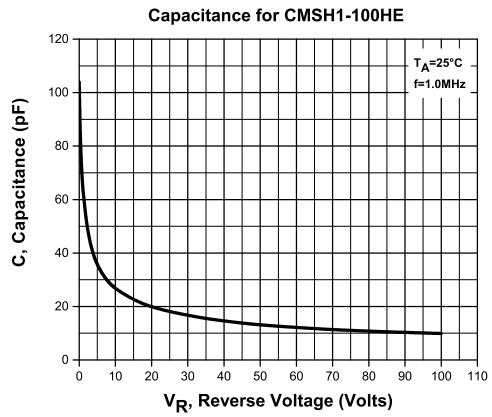
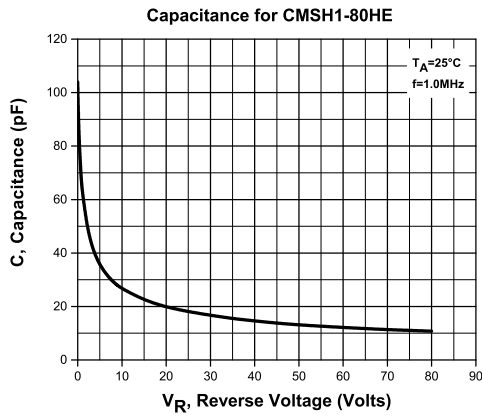
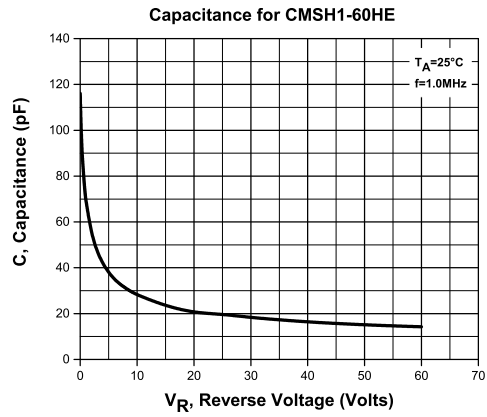
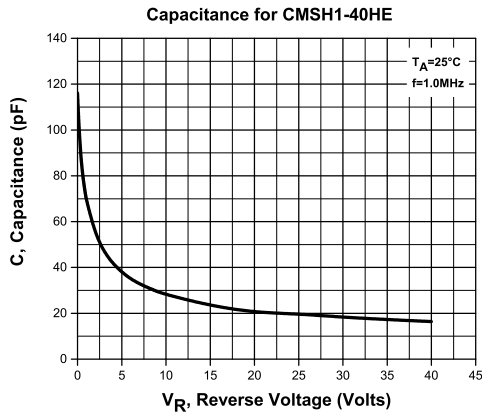
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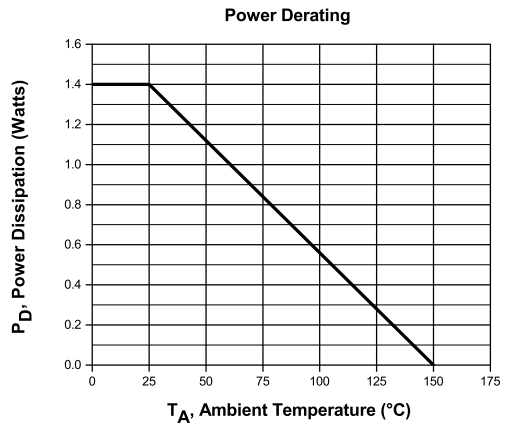
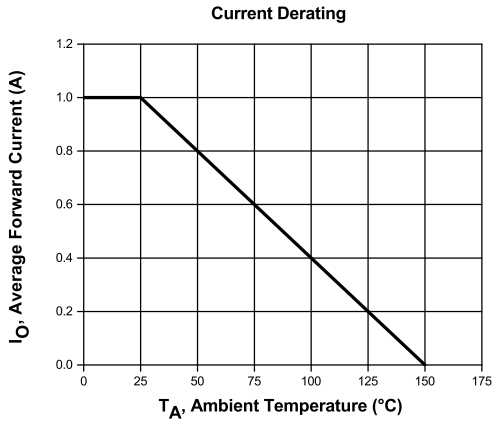
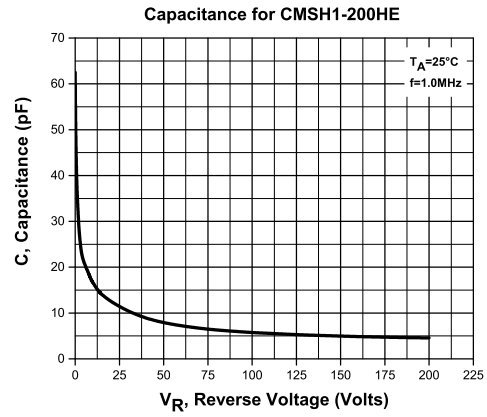
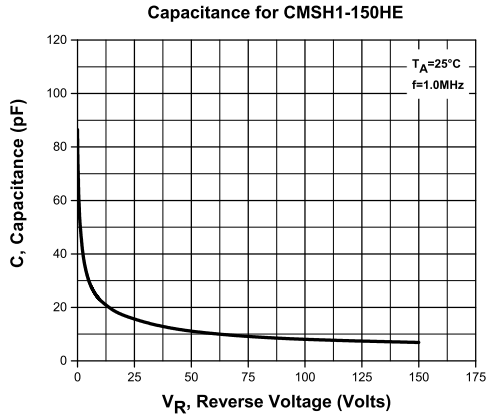
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TYPICAL ELECTRICAL CHARACTERISTICS



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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

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).

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

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