

CMR5H-06

**SURFACE MOUNT SILICON
HYPERFAST
RECOVERY RECTIFIER
5.0 AMP, 600 VOLT**

**HYPER
FAST**



SMC CASE

Central
Semiconductor Corp.

www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMR5H-06 is a HyperFast power rectifier manufactured in the epoxy molded SMC case. The extremely fast reverse recovery characteristics make this device an ideal choice for PFC and other fast switching applications.

MARKING CODE: C5H06

APPLICATIONS:

- Power factor correction
- Motor control
- DC-DC output rectification
- Freewheeling diode

FEATURES:

- HyperFast recovery time (20ns TYP)
- High surge capability
- Low leakage current

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

| | SYMBOL | | UNITS |
|--|----------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 600 | V |
| DC Blocking Voltage | V_R | 600 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 420 | V |
| Average Forward Current ($T_L=75^\circ\text{C}$) | I_O | 5.0 | A |
| Peak Forward Surge Current, $t_p=8.3\text{ms}$ | I_{FSM} | 100 | A |
| Operating and Storage Junction Temperature | T_J, T_{stg} | -65 to +175 | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JL} | 10 | $^\circ\text{C/W}$ |

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

| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|---------------|---|------------|------------|------------|---------------|
| I_R | $V_R=600\text{V}$ | | 0.2 | 1.0 | μA |
| I_R | $V_R=600\text{V}, T_A=150^\circ\text{C}$ | | | 500 | μA |
| BV_R | $I_R=100\mu\text{A}$ | 600 | | | V |
| V_F | $I_F=5.0\text{A}$ | | 1.55 | 2.0 | V |
| C_J | $V_R=4.0\text{V}, f=1.0\text{MHz}$ | | 17 | | pF |
| t_{rr} | $I_F=5.0\text{A}, V_R=400\text{V}, di/dt=200\text{A}/\mu\text{s}$ | | 20 | 22 | ns |

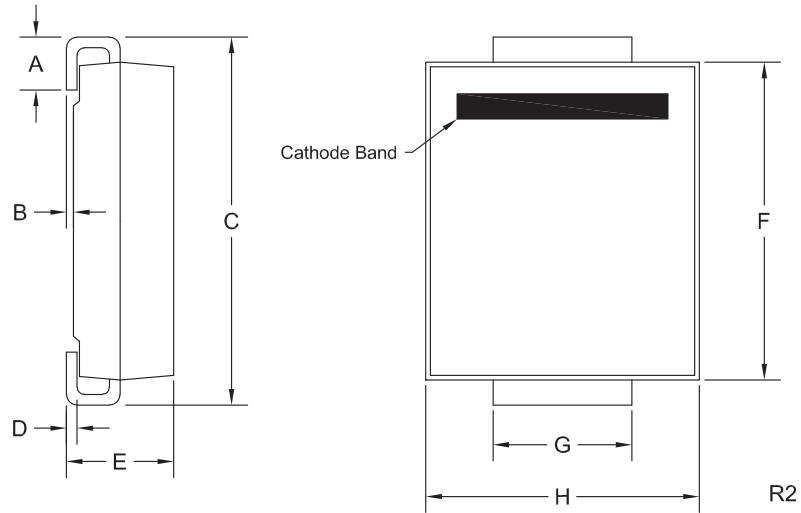
R1 (27-July 2018)

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SMC CASE - MECHANICAL OUTLINE



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| SYMBOL | INCHES | | MILLIMETERS | |
|--------|--------|-------|-------------|------|
| | MIN | MAX | MIN | MAX |
| A | 0.030 | 0.060 | 0.76 | 1.52 |
| B | 0.002 | 0.008 | 0.05 | 0.20 |
| C | 0.305 | 0.320 | 7.75 | 8.13 |
| D | 0.006 | 0.012 | 0.15 | 0.31 |
| E | 0.079 | 0.103 | 2.00 | 2.62 |
| F | 0.260 | 0.280 | 6.60 | 7.11 |
| G | 0.108 | 0.128 | 2.75 | 3.25 |
| H | 0.220 | 0.245 | 5.59 | 6.22 |

SMC (REV: R2)

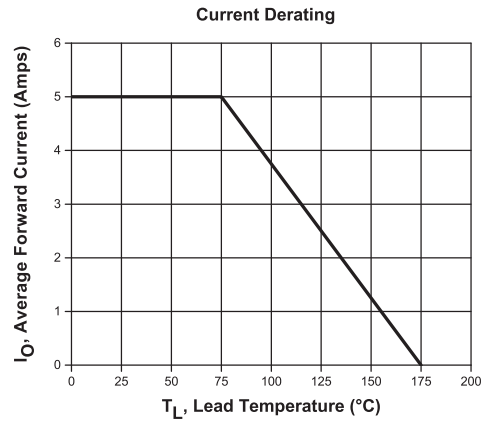
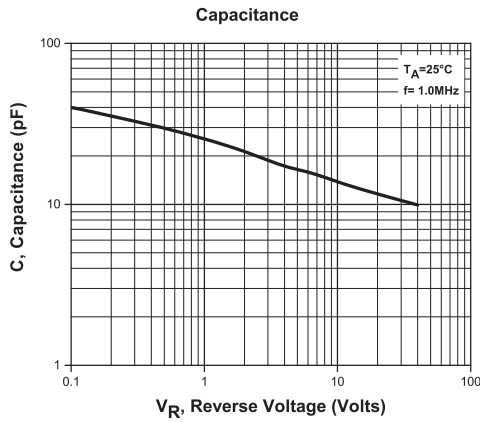
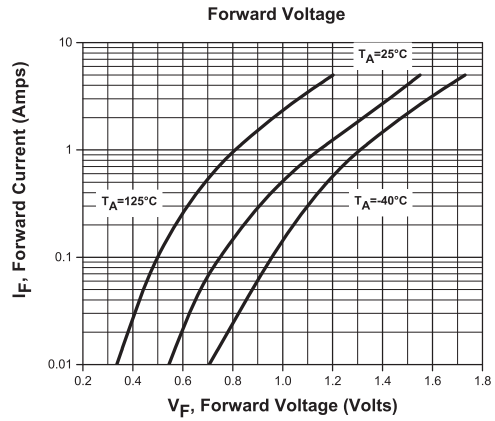
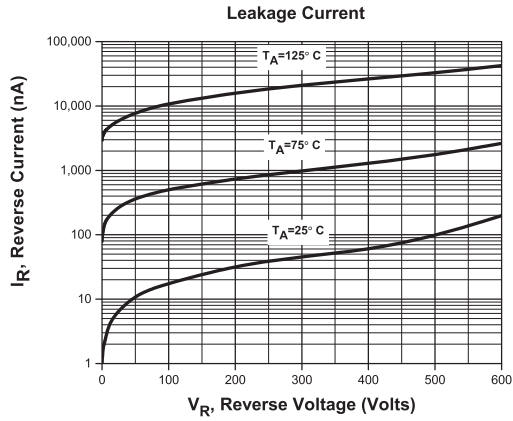
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TYPICAL ELECTRICAL CHARACTERISTICS



R1 (27-July 2018)

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

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