

CMR5H-06

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



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

**HYPER  
FAST**



**SMC CASE**

**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)

	<b>SYMBOL</b>		<b>UNITS</b>
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	$\theta_{JL}$	10	$^{\circ}\text{C/W}$

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

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>TYP</b>	<b>MAX</b>	<b>UNITS</b>
$I_R$	$V_R=600\text{V}$		0.2	1.0	$\mu\text{A}$
$I_R$	$V_R=600\text{V}, T_A=150^{\circ}\text{C}$			500	$\mu\text{A}$
$BV_R$	$I_R=100\mu\text{A}$	600			V
$V_F$	$I_F=5.0\text{A}$		1.55	1.70	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

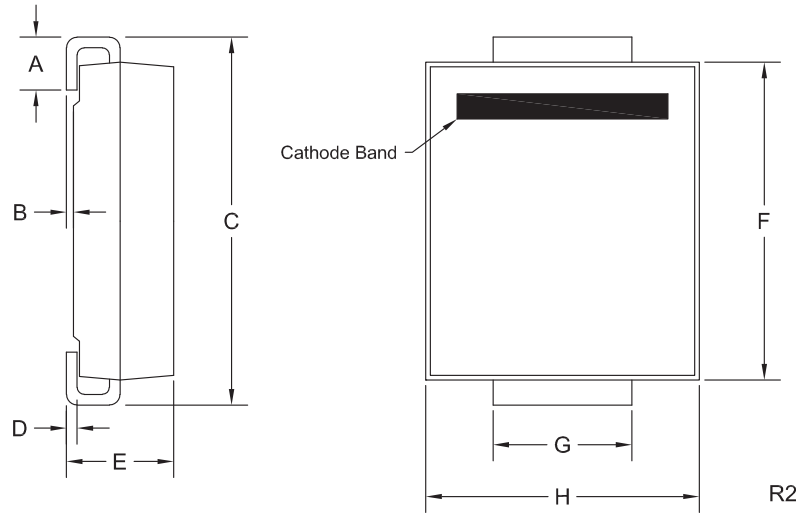
R0 (12-February 2014)

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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)

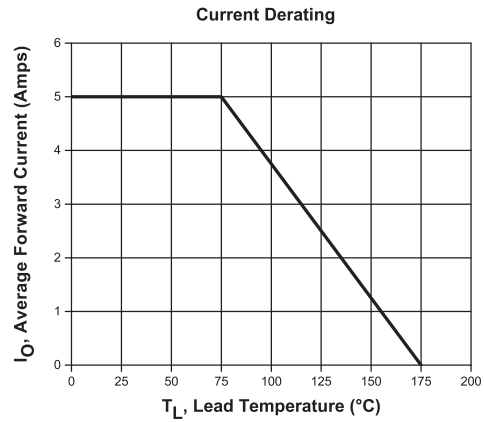
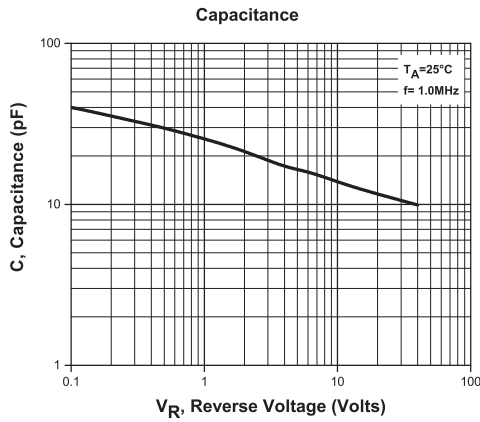
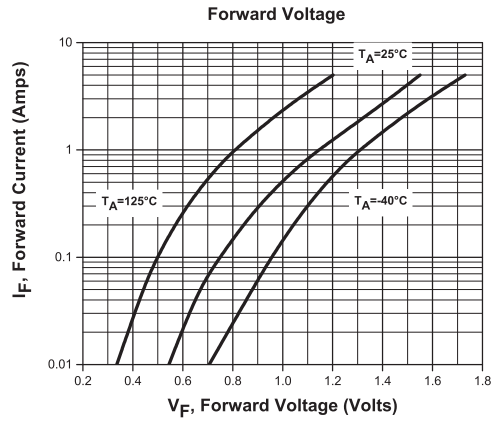
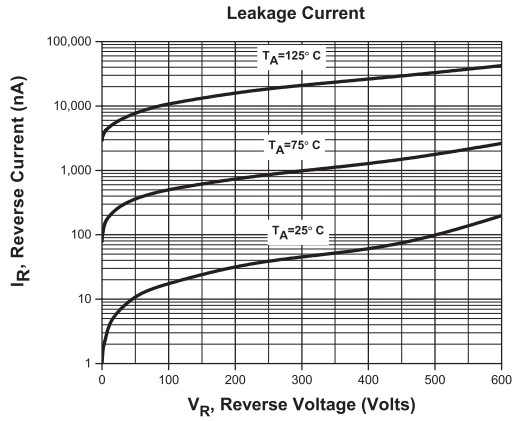
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TYPICAL ELECTRICAL CHARACTERISTICS



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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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### CONTACT US

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