



**THE DATASHEET OF  
CMSH5-100HV TR13 PBFREE**



CMSH5-100HV  
CMSH5-150HV  
CMSH5-200HV

**SURFACE MOUNT SILICON  
SCHOTTKY RECTIFIERS  
5.0 AMP, 100 THRU 200 VOLT**



SMC CASE



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMSH5-100HV series 5.0 Amp surface mount silicon Schottky rectifiers are highly reliable components designed for use in all types of commercial, industrial, entertainment, computer, and lighting applications. To order devices on 16mm Tape and Reel (3000/13" Reel), add TR13 suffix to part number.

**MARKING CODE: SEE MARKING CODE TABLE ON FOLLOWING PAGE**

**FEATURES:**

- High voltage capability
- High reliability
- Energy efficiency
- Flammability classification UL94V-0
- "C" bend construction provides strain relief when mounted on PC board

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

	SYMBOL	CMSH5 -100HV	CMSH5 -150HV	CMSH5 -200HV	UNITS
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	150	200	V
DC Blocking Voltage	$V_R$	100	150	200	V
RMS Reverse Voltage	$V_R(\text{RMS})$	70	105	140	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 (Note 1)	$\theta_{JA}$		50		$^\circ\text{C/W}$
Thermal Resistance (Note 1)	$\theta_{JL}$		10		$^\circ\text{C/W}$

**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	$\mu\text{A}$
$I_R$	$V_R=\text{Rated } V_{RRM}, T_J=100^\circ\text{C}$		10	mA
$V_F$	$I_F=5.0\text{A (CMSH5-100HV)}$	0.76	0.80	V
$V_F$	$I_F=5.0\text{A (CMSH5-150HV)}$	0.80	0.90	V
$V_F$	$I_F=5.0\text{A (CMSH5-200HV)}$	0.82	0.90	V
$C_J$	$V_R=0, f=1.0\text{MHz (CMSH5-100HV)}$	498		pF
$C_J$	$V_R=0, f=1.0\text{MHz (CMSH5-150HV)}$	451		pF
$C_J$	$V_R=0, f=1.0\text{MHz (CMSH5-200HV)}$	334		pF

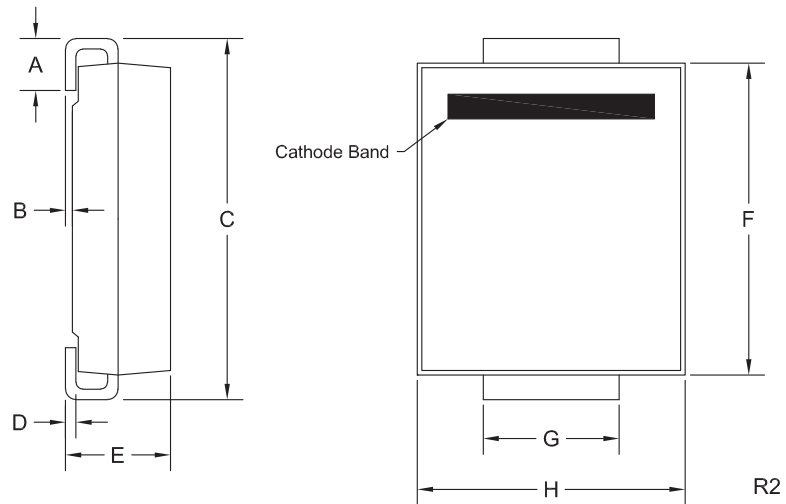
Note 1: FR-4 epoxy PCB with copper mounting pad area of 25.4mm<sup>2</sup>.

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**SMC CASE - MECHANICAL OUTLINE**



DEVICE	MARKING CODE
CMSH5-100HV	CS510HV
CMSH5-150HV	CS515HV
CMSH5-200HV	CS520HV

SYMBOL	DIMENSIONS			
	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)

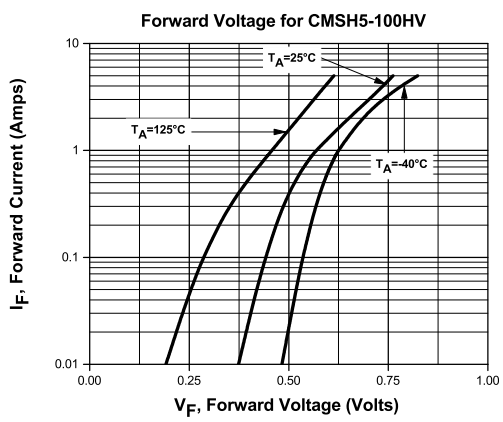
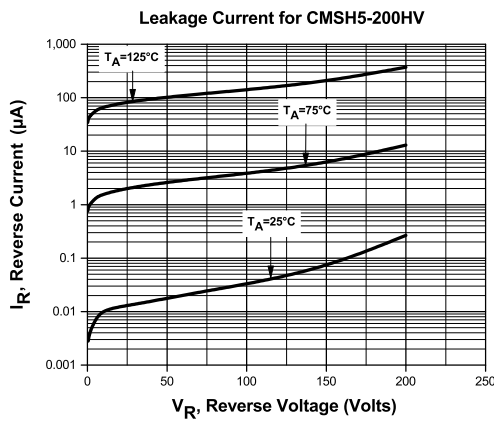
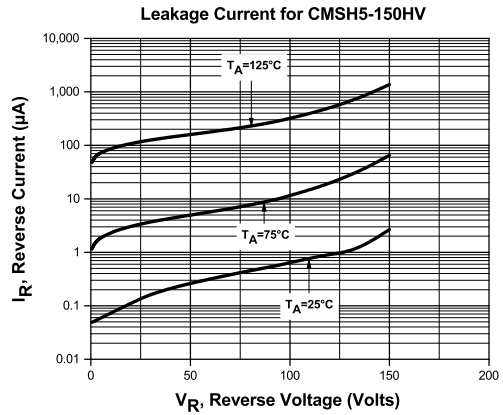
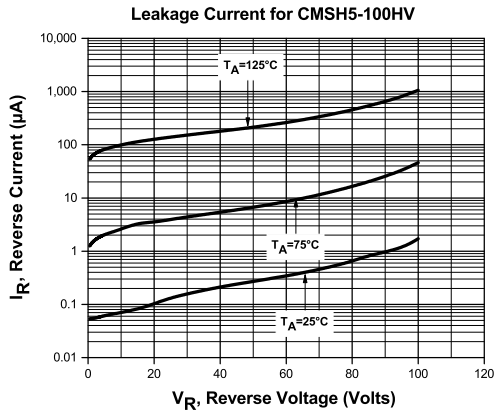
R4 (22-December 2015)

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TYPICAL ELECTRICAL CHARACTERISTICS



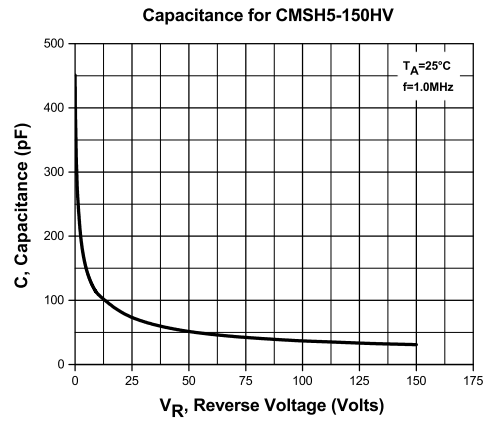
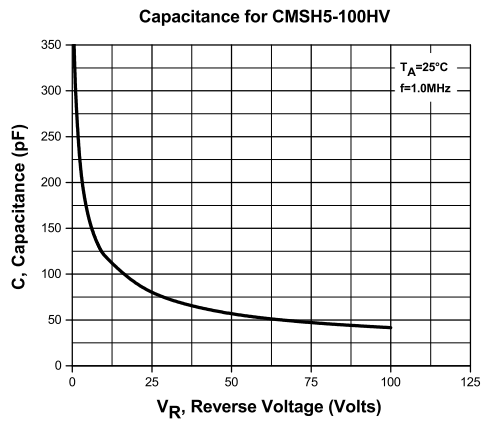
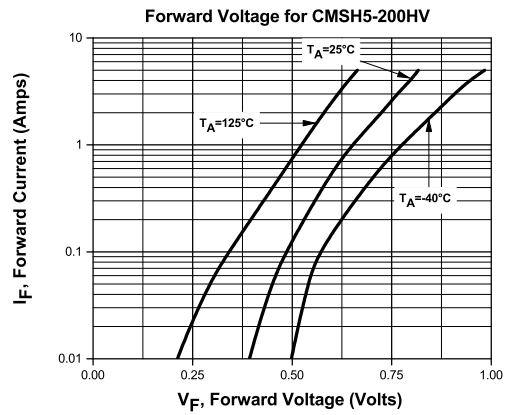
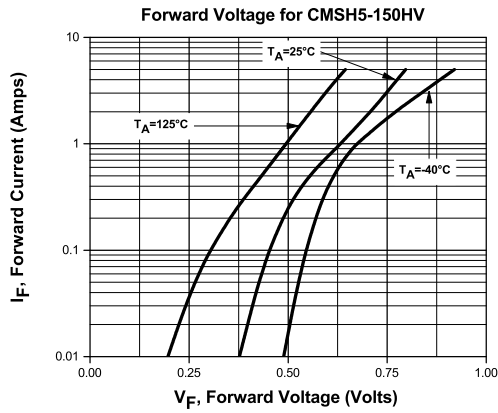
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TYPICAL ELECTRICAL CHARACTERISTICS



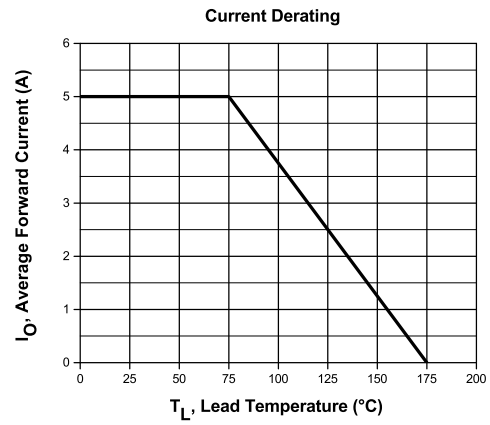
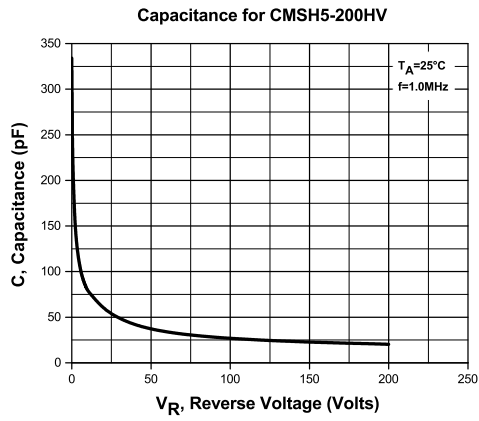
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### TYPICAL ELECTRICAL CHARACTERISTICS



R4 (22-December 2015)

## 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

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-  Global Sourcing Solution
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-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management