

# **ce** 'n Semiconductor Corp

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

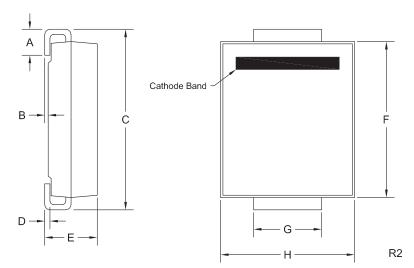
MAXIMUM RATINGS: (T <sub>A</sub> =25°C unless otherwise	noted)	CMSH5	CMSH5	CMSH5	
Peak Repetitive Reverse Voltage	SYMBOL	<u>-100HV</u> 100	<u>-150HV</u> 150	<u>-200HV</u> 200	UNITS V
DC Blocking Voltage	V <sub>RRM</sub> V <sub>R</sub>	100	150	200	v
RMS Reverse Voltage	vR VR(RMS)	70	105	140	v
Average Forward Current (T <sub>I</sub> =75°C)		10	5.0	140	Å
Peak Forward Surge Current, tp=8.3ms	IFSM		100		А
Operating and Storage Junction Temperature	TJ, Tstg		-65 to +175	5	°C
Thermal Resistance (Note 1)	ΘJA		50		°C/W
Thermal Resistance (Note 1)	ΘJL		10		°C/W

ELECTRICA	L CHARACTERISTICS: (T <sub>A</sub> =25°C unle	ess otherwise n	oted)	
SYMBOL	TEST CONDITIONS	TYP	MAX	UNITS
I <sub>R</sub>	V <sub>R</sub> =Rated V <sub>RRM</sub>		50	μA
IR	V <sub>R</sub> =Rated V <sub>RRM</sub> , T <sub>J</sub> =100°C		10	mA
V <sub>F</sub>	I <sub>F</sub> =5.0A (CMSH5-100HV)	0.76	0.80	V
V <sub>F</sub>	I <sub>F</sub> =5.0A (CMSH5-150HV)	0.80	0.90	V
V <sub>F</sub>	I <sub>F</sub> =5.0A (CMSH5-200HV)	0.82	0.90	V
Сј	V <sub>R</sub> =0, f=1.0MHz (CMSH5-100HV)	498		pF
СЈ	V <sub>R</sub> =0, f=1.0MHz (CMSH5-150HV)	451		pF
CJ	V <sub>R</sub> =0, f=1.0MHz (CMSH5-200HV)	334		pF

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



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



# SMC CASE - MECHANICAL OUTLINE

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

DIMENSIONS					
	INCHES		MILLIMETERS		
SYMBOL	MIN	MAX	MIN	MAX	
A	0.030	0.060	0.76	1.52	
В	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	
Н	0.220	0.245	5.59	6.22	
SMC (REV: R2)				REV: R2)	

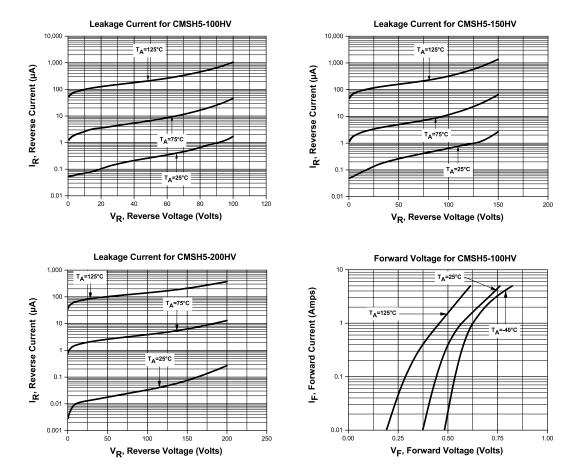
R4 (22-December 2015)

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



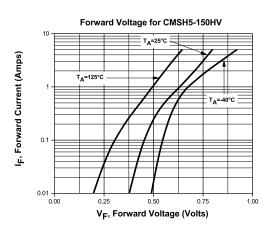
# TYPICAL ELECTRICAL CHARACTERISTICS

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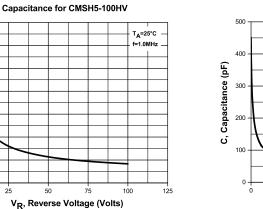


CMSH5-100HV CMSH5-150HV CMSH5-200HV

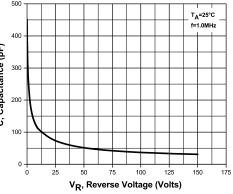
### SURFACE MOUNT SILICON SCHOTTKY RECTIFIERS 5.0 AMP, 100 THRU 200 VOLT



# Forward Voltage for CMSH5-200HV 10 T<sub>A</sub>=25°C I<sub>F</sub>, Forward Current (Amps) T<sub>A</sub>=125°C T<sub>A</sub>=-40°C 0.1 0.01 -0.00 0.25 0.50 0.75 1.00 V<sub>F</sub>, Forward Voltage (Volts) Capacitance for CMSH5-150HV 500



**TYPICAL ELECTRICAL CHARACTERISTICS** 



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350

300

250

200 150

100

50 -0 -

ò

C, Capacitance (pF)





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

#### Capacitance for CMSH5-200HV **Current Derating** 350 6 T<sub>A</sub>=25°C l<sub>O</sub>, Average Forward Current (A) 300 f=1.0MHz 5 C, Capacitance (pF) 250 4 -200 -3 -150 2 100 -50 0+ 0+ 50 100 150 200 250 25 100 125 50 75 150 175 200 V<sub>R</sub>, Reverse Voltage (Volts) T<sub>L</sub>, Lead Temperature (°C)

# TYPICAL ELECTRICAL CHARACTERISTICS

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- Inventory bonding
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- Custom bar coding for shipments
- Custom product packing

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- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities

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- Application notes
- Application and design sample kits
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# CONTACT US

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