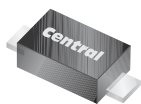


CMMSH1-20 CMMSH1-20G\*  
 CMMSH1-40 CMMSH1-40G\*  
 CMMSH1-60 CMMSH1-60G\*  
 CMMSH1-100 CMMSH1-100G\*

**SURFACE MOUNT SILICON  
 SCHOTTKY RECTIFIER  
 1 AMP, 20 THRU 100 VOLTS**



**SOD-123F CASE**

\* Device is *Halogen Free* by design

**FEATURES:**

- Small size (58% smaller than the SMA package)
- 67% lower profile than SMA
- Greatly improved power dissipation per board area as compared to the SMA



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMMSH1 Series are high current Schottky rectifiers in the SOD-123F surface mount package. These devices are suitable for design applications such as AC/DC, DC/DC converters, and reverse battery protection circuits in a variety of portable and battery powered products.

**MARKING CODES:**

DEVICE	CODE	Halogen Free Devices: DEVICE	CODE
CMMSH1-20	CS20F	CMMSH1-20G	CS20G
CMMSH1-40	CS40F	CMMSH1-40G	CS40G
CMMSH1-60	CS60F	CMMSH1-60G	CS60G
CMMSH1-100	CS100F	CMMSH1-100G	CS100G

- High Current, Low Forward Voltage
- Thermally efficient Flat Lead package design

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

	SYMBOL	CMMSH1				UNITS
		-20 -20G	-40 -40G	-60 -60G	-100 -100G	
Peak Repetitive Reverse Voltage	$V_{RRM}$	20	40	60	100	V
DC Blocking Voltage	$V_R$	20	40	60	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	28	42	70	V
Average Forward Current ( $T_L=75^\circ\text{C}$ )	$I_O$			1.0		A
Peak Forward Surge Current (8.3ms)	$I_{FSM}$			30		A
Power Dissipation (Note 1)	$P_D$			1.14		W
Operating Junction Temperature	$T_J$		-65 to +125			$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-65 to +150			$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$			88		$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MAX	UNITS
$I_R$	$V_R$ =Rated $V_{RRM}$	0.50	mA
$I_R$	$V_R$ =Rated $V_{RRM}$ , $T_A=100^\circ\text{C}$	10	mA
$V_F$	$I_F=1.0\text{A}$ (CMMSH1-20, -20G)	0.45	V
$V_F$	$I_F=1.0\text{A}$ (CMMSH1-40, -40G)	0.55	V
$V_F$	$I_F=1.0\text{A}$ (CMMSH1-60, -60G)	0.70	V
$V_F$	$I_F=1.0\text{A}$ (CMMSH1-100, -100G)	0.85	V

Notes: (1) FR-4 Epoxy PC Board with Copper Mounting Pad Area of 2.9mm<sup>2</sup>

CMMSH1-20 CMMSH1-20G\*  
 CMMSH1-40 CMMSH1-40G\*  
 CMMSH1-60 CMMSH1-60G\*  
 CMMSH1-100 CMMSH1-100G\*

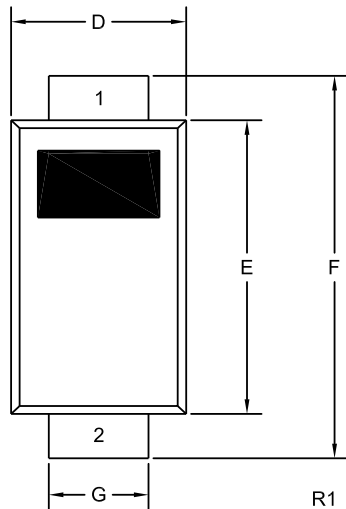
**SURFACE MOUNT SILICON  
 SCHOTTKY RECTIFIER  
 1 AMP, 20 THRU 100 VOLTS**



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

SYMBOL	TEST CONDITIONS	TYP	UNITS
$C_J$	$V_R=4.0\text{V}$ , $f=1.0\text{MHz}$ (CMMSH1-20, -20G)	60	pF
$C_J$	$V_R=4.0\text{V}$ , $f=1.0\text{MHz}$ (CMMSH1-40, -40G)	60	pF
$C_J$	$V_R=4.0\text{V}$ , $f=1.0\text{MHz}$ (CMMSH1-60, -60G)	50	pF
$C_J$	$V_R=4.0\text{V}$ , $f=1.0\text{MHz}$ (CMMSH1-100, -100G)	40	pF

**SOD-123F CASE - MECHANICAL OUTLINE**



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.035	0.043	0.88	1.08
B	0.020	0.031	0.50	0.80
C	0.004	0.008	0.10	0.20
D	0.065	0.077	1.65	1.95
E	0.104	0.116	2.65	2.95
F	0.140	0.156	3.55	3.95
G	0.030	0.041	0.75	1.05

SOD-123F (REV:R1)

**LEAD CODE:**

- 1) Cathode
- 2) Anode

**MARKING CODES:**

DEVICE	CODE
CMMSH1-20	CS20F
CMMSH1-40	CS40F
CMMSH1-60	CS60F
CMMSH1-100	CS100F
CMMSH1-20G*	CS20G
CMMSH1-40G*	CS40G
CMMSH1-60G*	CS60G
CMMSH1-100G*	CS100G

\* Device is *Halogen Free* by design

R5 (25-January 2010)

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