



**THE DATASHEET OF  
CMSH3-150MFL TR13 PBFREE**



CMSH3-100MFL  
 CMSH3-150MFL  
 CMSH3-200MFL

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



**SMAFL CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMSH3-100MFL, CMSH3-150MFL and CMSH3-200MFL are extremely efficient, high voltage, silicon Schottky rectifiers with low total conduction losses and packaged in the low profile SMAFL surface mount case. The SMAFL fits on the existing industry standard SMA mounting pad layouts.

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

**FEATURES:**

- High current capability (3.0A)
- Low leakage current
- Low forward voltage
- Low package profile (1.0mm)
- Flammability classification UL94V-0

**APPLICATIONS:**

- Reverse polarity protection
- Voltage clamping
- DC-DC output rectification
- Power management

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

	<b>SYMBOL</b>	<b>CMSH3 -100MFL</b>	<b>CMSH3 -150MFL</b>	<b>CMSH3 -200MFL</b>	<b>UNITS</b>
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	150	200	V
DC Blocking Voltage	$V_R$	100	150	200	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	105	140	V
Average Forward Current ( $T_L=110^{\circ}\text{C}$ )	$I_O$		3.0		A
Peak Forward Surge Current, $t_p=8.3\text{ms}$	$I_{FSM}$		80		A
Operating and Storage Junction Temperature	$T_J, T_{stg}$		-65 to +150		$^{\circ}\text{C}$
Thermal Resistance	$\theta_{JL}$		20		$^{\circ}\text{C/W}$

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

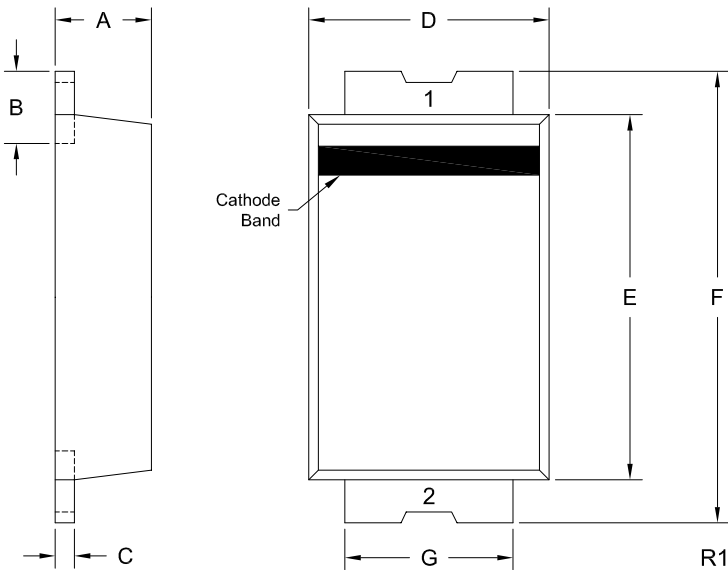
<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>TYP</b>	<b>MAX</b>	<b>UNITS</b>
$I_R$	$V_R=\text{Rated } V_{RRM}$		50	$\mu\text{A}$
$V_F$	$I_F=3.0\text{A}$ (CMSH3-100MFL)	0.76	0.80	V
$V_F$	$I_F=3.0\text{A}$ (CMSH3-150MFL)	0.81	0.90	V
$V_F$	$I_F=3.0\text{A}$ (CMSH3-200MFL)	0.85	0.90	V
$C_J$	$V_R=4.0\text{V}$ , $f=1.0\text{MHz}$ (CMSH3-100MFL)	110		pF
$C_J$	$V_R=4.0\text{V}$ , $f=1.0\text{MHz}$ (CMSH3-150MFL)	90		pF
$C_J$	$V_R=4.0\text{V}$ , $f=1.0\text{MHz}$ (CMSH3-200MFL)	70		pF

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**SMAFL CASE - MECHANICAL OUTLINE**



DEVICE	MARKING CODE
CMSH3-100MFL	CS310MFL
CMSH3-150MFL	CS315MFL
CMSH3-200MFL	CS320MFL

SYMBOL	DIMENSIONS		DIMENSIONS	
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.035	0.044	0.90	1.10
B	0.021	0.038	0.55	0.95
C	0.006	0.010	0.15	0.25
D	0.094	0.103	2.40	2.60
E	0.145	0.154	3.70	3.90
F	0.177	0.193	4.50	4.90
G	0.065	0.073	1.65	1.85

SMAFL (REV: R1)

**LEAD CODE:**

- 1) Cathode
- 2) Anode

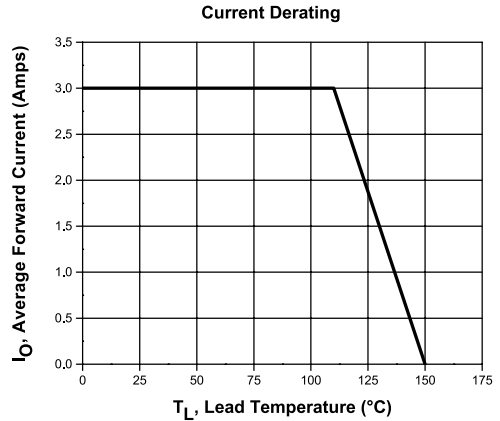
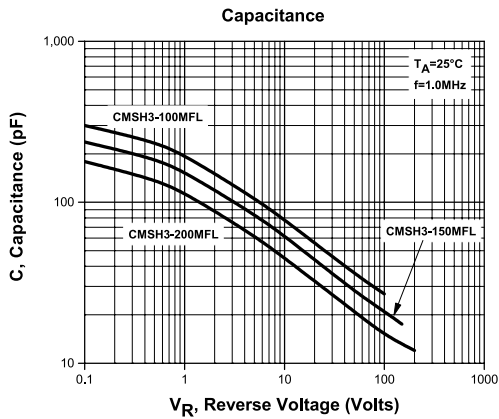
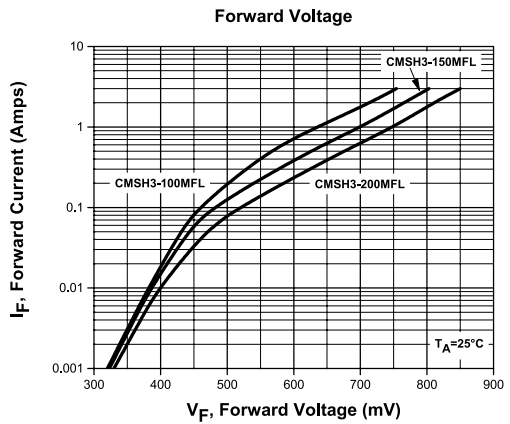
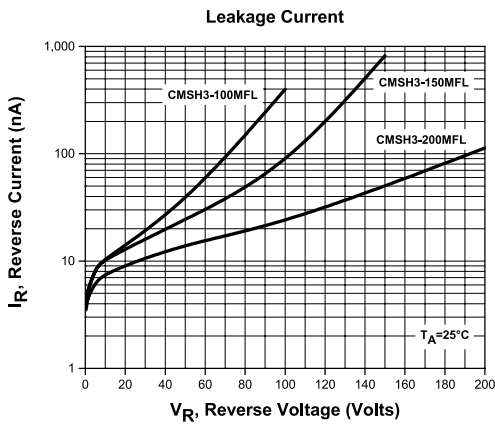
R4 (26-May 2022)

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TYPICAL ELECTRICAL CHARACTERISTICS



## 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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