

CMSH3-20MA CMSH3-60MA  
CMSH3-40MA CMSH3-100MA

**SURFACE MOUNT SILICON  
SCHOTTKY RECTIFIERS  
3.0 AMP, 20 THRU 100 VOLT**



**SMA CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMSH3-20MA series 3.0 Amp surface mount silicon Schottky rectifier is a well constructed, highly reliable component designed for use in all types of commercial, industrial, entertainment, computer, and automotive applications.

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

**FEATURES:**

- High current capability
- Flammability classification UL94V-0
- High reliability

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

	SYMBOL	CMSH3 -20MA	CMSH3 -40MA	CMSH3 -60MA	CMSH3 -100MA	UNITS
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	71	V
Average Forward Current ( $T_L=75^{\circ}\text{C}$ )	$I_O$			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	$\theta_{JL}$			30		$^{\circ}\text{C/W}$

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

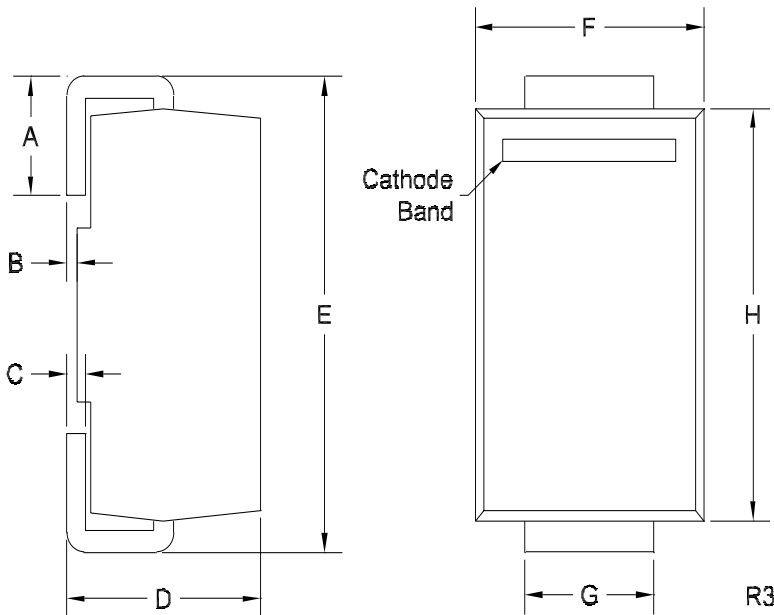
SYMBOL	TEST CONDITIONS	TYP	MAX	UNITS
$I_R$	$V_R=\text{Rated } V_{RRM}$		500	$\mu\text{A}$
$I_R$	$V_R=\text{Rated } V_{RRM}, T_A=100^{\circ}\text{C}$		20	$\text{mA}$
$V_F$	$I_F=3.0\text{A (CMSH3-20MA)}$	0.46	0.50	V
$V_F$	$I_F=3.0\text{A (CMSH3-40MA)}$	0.47	0.50	V
$V_F$	$I_F=3.0\text{A (CMSH3-60MA)}$	0.56	0.70	V
$V_F$	$I_F=3.0\text{A (CMSH3-100MA)}$	0.76	0.85	V
$C_J$	$V_R=4.0\text{V}, f=1.0\text{MHz (CMSH3-20MA)}$	174		$\text{pF}$
$C_J$	$V_R=4.0\text{V}, f=1.0\text{MHz (CMSH3-40MA)}$	160		$\text{pF}$
$C_J$	$V_R=4.0\text{V}, f=1.0\text{MHz (CMSH3-60MA)}$	121		$\text{pF}$
$C_J$	$V_R=4.0\text{V}, f=1.0\text{MHz (CMSH3-100MA)}$	83		$\text{pF}$

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SMA CASE - MECHANICAL OUTLINE



DEVICE	MARKING CODE
CMSH3-20MA	CS320MA
CMSH3-40MA	CS340MA
CMSH3-60MA	CS360MA
CMSH3-100MA	CS3100MA

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	0.006	0.012	0.15	0.30
D	0.078	0.103	1.98	2.62
E	0.188	0.220	4.78	5.59
F	0.090	0.115	2.29	2.92
G	0.050	0.070	1.27	1.78
H	0.157	0.181	3.99	4.60

SMA (REV:R3)

R5 (05-June 2023)

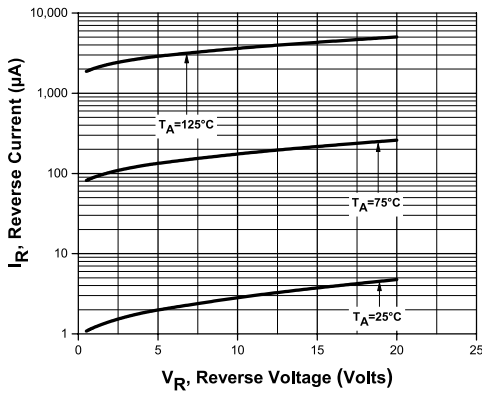
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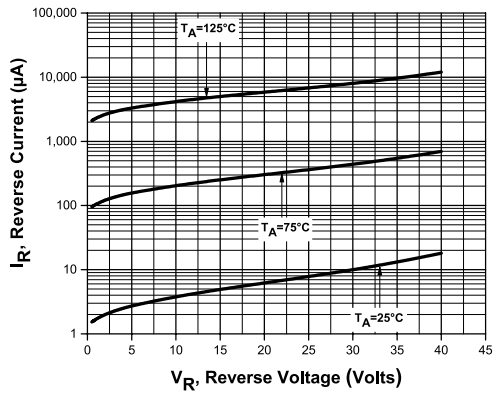


TYPICAL ELECTRICAL CHARACTERISTICS

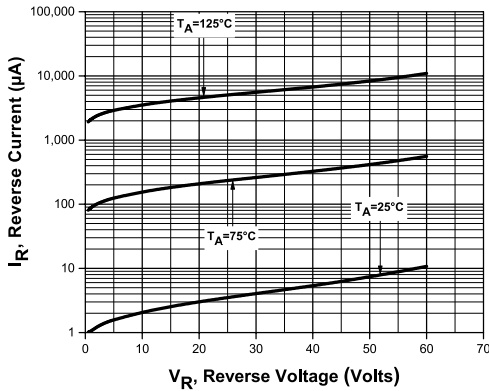
Leakage Current for CMSH3-20MA



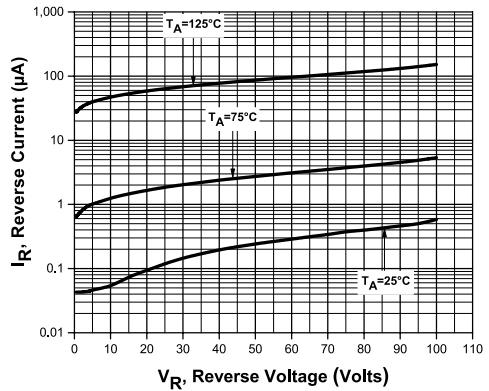
Leakage Current for CMSH3-40MA



Leakage Current for CMSH3-60MA



Leakage Current for CMSH3-100MA



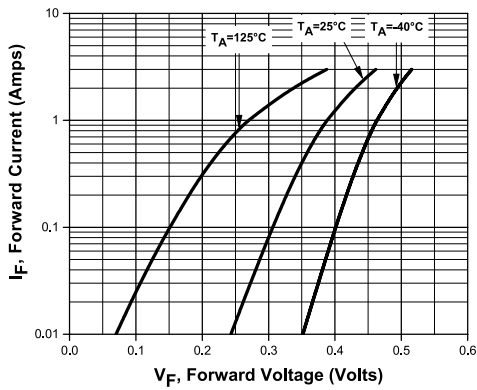
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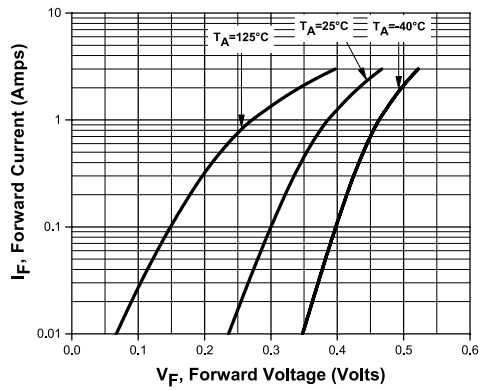
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**TYPICAL ELECTRICAL CHARACTERISTICS**

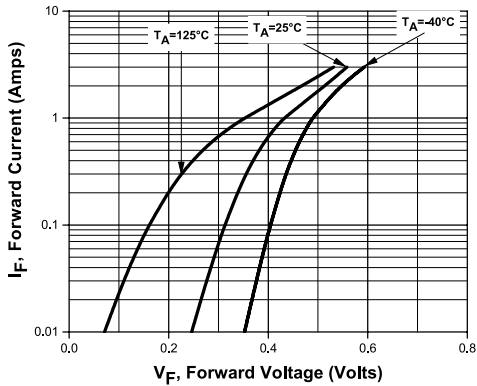
**Forward Voltage for CMSH3-20MA**



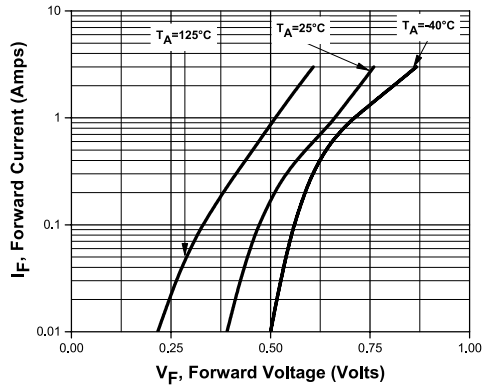
**Forward Voltage for CMSH3-40MA**



**Forward Voltage for CMSH3-60MA**



**Forward Voltage for CMSH3-100MA**



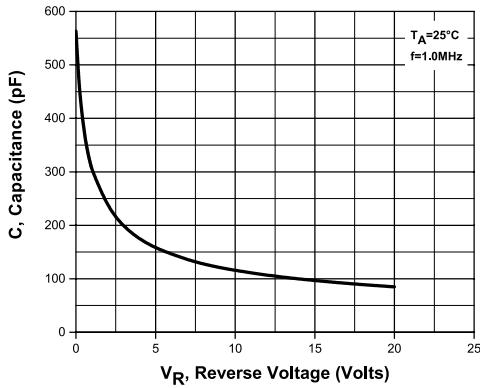
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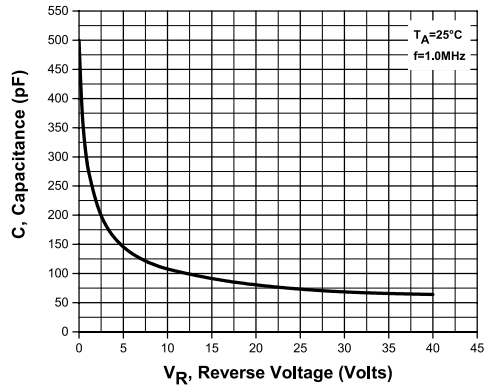
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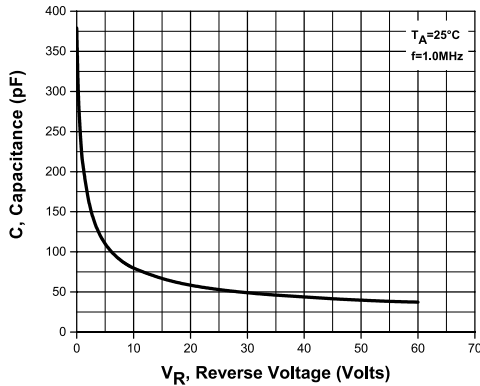
**Capacitance for CMSH3-20MA**



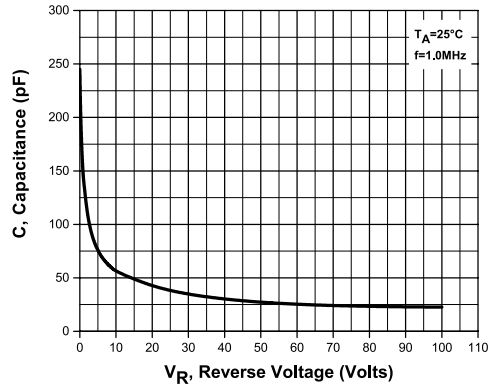
**Capacitance for CMSH3-40MA**



**Capacitance for CMSH3-60MA**



**Capacitance for CMSH3-100MA**

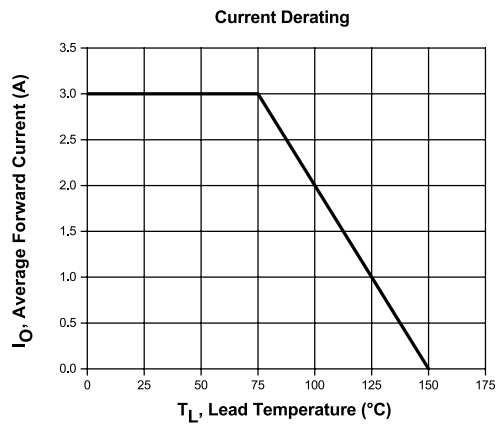


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## TYPICAL ELECTRICAL CHARACTERISTICS



## 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

#### Corporate Headquarters & Customer Support Team

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Hauppauge, NY 11788 USA  
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