

CMMSH1-40L

SURFACE MOUNT SILICON  
LOW  $V_F$   
SCHOTTKY RECTIFIER  
1.0 AMP, 40 VOLT



SOD-123F CASE



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMMSH1-40L is a 1.0A, low  $V_F$ , silicon Schottky rectifier. This high efficiency, low  $V_F$  Schottky features high current capacity packaged in a small, thermally efficient, SOD-123F surface mount package. When compared to similar devices in the larger SMA package, this device is 58% smaller, with a 67% lower profile, making it ideally suited for applications where performance and size are critical.

**MARKING CODE: CS40FL**

**APPLICATIONS:**

- DC-DC converters
- Voltage clamping
- Protection circuits
- Battery powered applications including cell phones, digital cameras, pagers, PDAs, laptop computers, etc.

**FEATURES:**

- High current (1.0A Max), 40V device
- Low  $V_F$  (0.45V Max)
- High surge current 50A
- Thermally efficient SOD-123F Flat Lead package design

**MAXIMUM RATINGS:** ( $T_J=25^\circ\text{C}$ )

Peak Repetitive Reverse Voltage  
DC Blocking Voltage  
Average Forward Current  
Peak Forward Surge Current  
Power Dissipation (Note 1)  
Operating Junction Temperature  
Storage Temperature  
Thermal Resistance

**SYMBOL**

SYMBOL		UNITS
$V_{RRM}$	40	V
$V_R$	40	V
$I_O$	1.0	A
$I_{FSM}$	50	A
$P_D$	550	mW
$T_J$	-55 to + 125	$^\circ\text{C}$
$T_{stg}$	-55 to + 150	$^\circ\text{C}$
$\Theta_{JA}$	181	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_R$	$V_R=20\text{V}$		3.0	150	$\mu\text{A}$
$I_R$	$V_R=40\text{V}$		10	500	$\mu\text{A}$
$I_R$	$V_R=40\text{V}, T_J=85^\circ\text{C}$			25	mA
$BV_R$	$I_R=0.5\text{mA}$	40			V
$V_F$	$I_F=1.0\text{A}$		0.4	0.45	V
$C_J$	$V_R=10\text{V}, f=1.0\text{MHz}$		70		pF

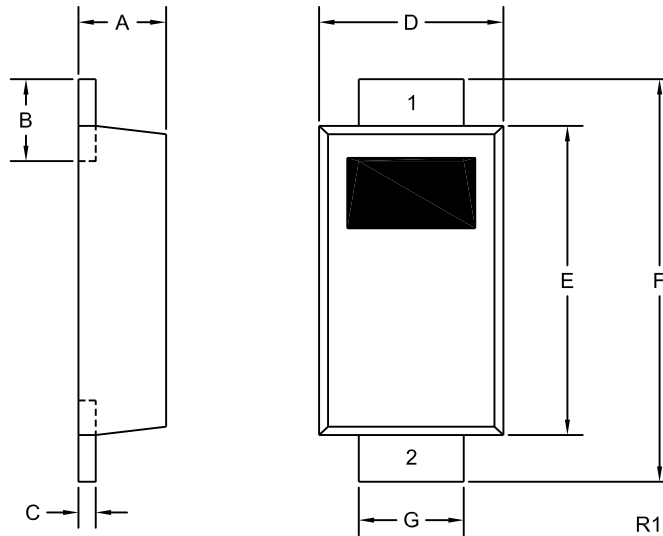
Note 1: FR-5 board (1.0 x 0.75 x 0.062in) with copper mounting pad area of 2.9mm<sup>2</sup>

R3 (24-November 2015)

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



**LEAD CODE:**

- 1) Cathode
- 2) Anode

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SYMBOL	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)

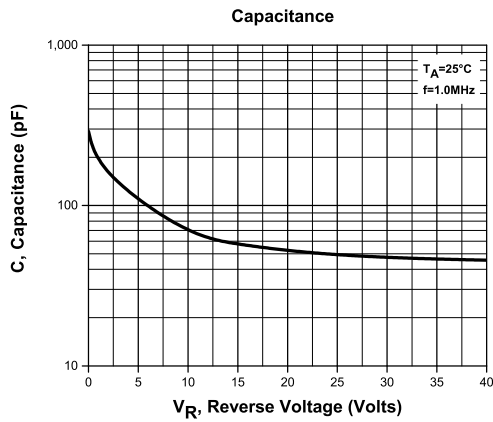
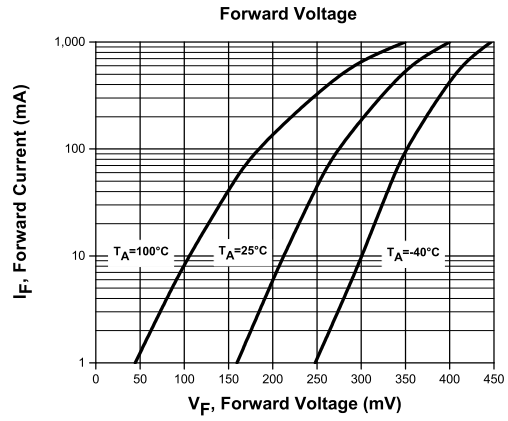
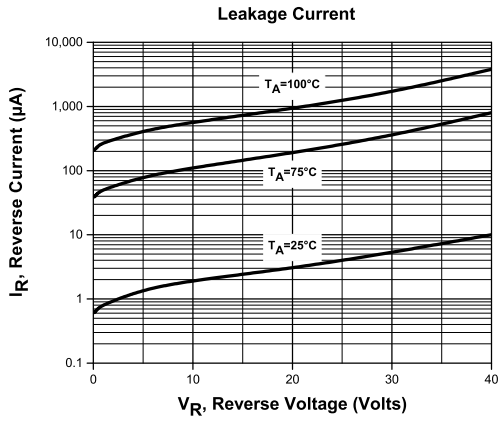
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TYPICAL ELECTRICAL CHARACTERISTICS



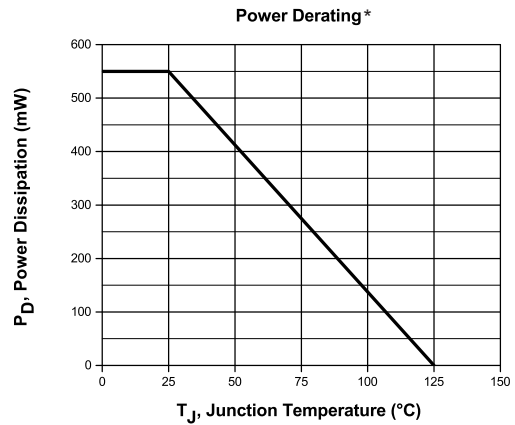
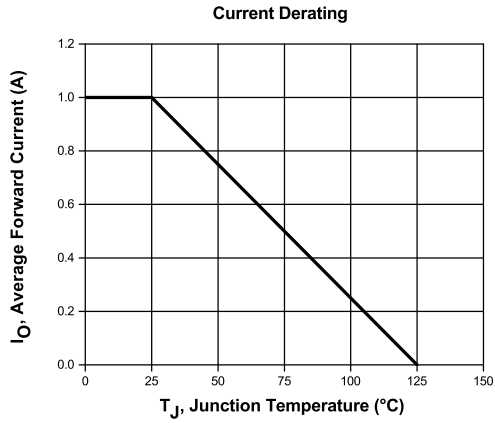
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### TYPICAL ELECTRICAL CHARACTERISTICS



\*FR-5 board (1.0 x 0.75 x 0.062in) with copper mounting pad area of 2.9mm<sup>2</sup>

R3 (24-November 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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