THE DATASHEET OF

CMMSH1-40L

CMMSH1-40L

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



SOD-123F CASE

Central Semiconductor Corp.

www.centralsemi.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°C)	**SYMBOL**		**UNITS**
Peak Repetitive Reverse Voltage	V_{RRM}	40	V
DC Blocking Voltage	V_R	40	V
Average Forward Current	I_O	1.0	A
Peak Forward Surge Current	I_{FSM}	50	A
Power Dissipation (Note 1)	P_D	550	mW
Operating Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 150	°C
Thermal Resistance	Θ_{JA}	181	°C/W

ELECTRICAL CHARACTERISTICS: (T_J=25°C unless otherwise noted)

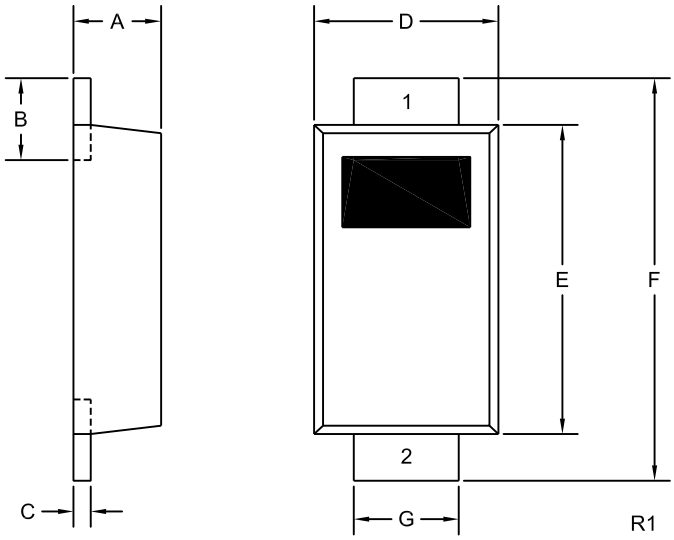
SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_R	V_R=20V		3.0	150	μA
I_R	V_R=40V		10	500	μA
I_R	V_R=40V, T_J=85°C			25	mA
BV_R	I_R=0.5mA	40			V
V_F	I_F=1.0A		0.4	0.45	V
C_J	V_R=10V, f=1.0MHz		70		pF

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

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SOD-123F CASE - MECHANICAL OUTLINE



LEAD CODE:
1) Cathode
2) Anode

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DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	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

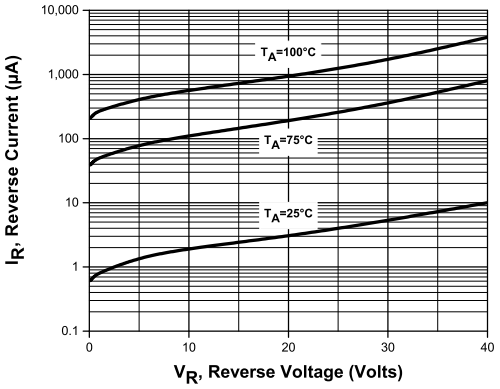
SOD-123F (REV:R1)

CMMSH1-40L

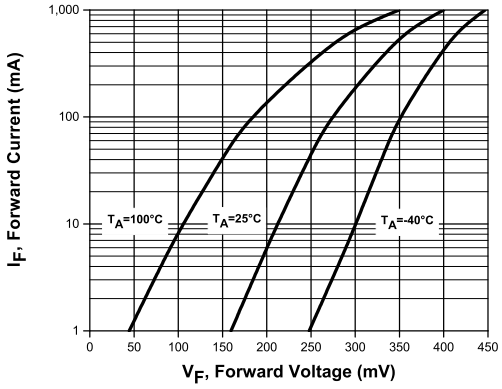
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TYPICAL ELECTRICAL CHARACTERISTICS

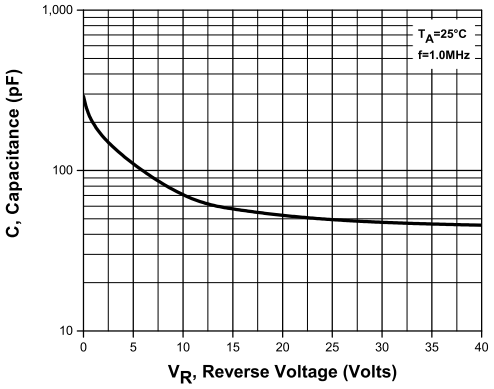
Leakage Current



Forward Voltage



Capacitance



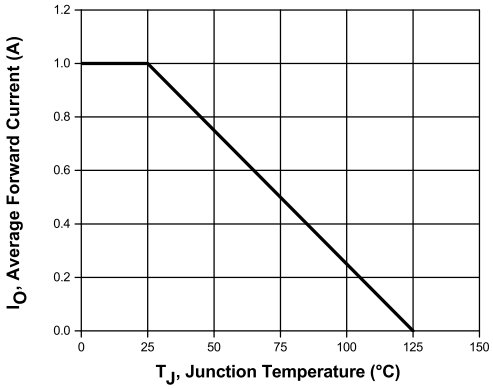
R3 (24-November 2015)

CMMSH1-40L

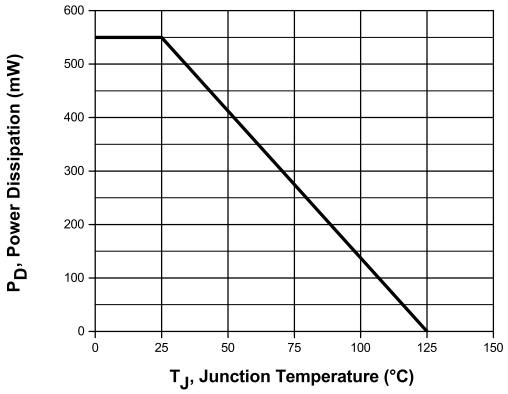
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TYPICAL ELECTRICAL CHARACTERISTICS

Current Derating



Power Derating*



*FR-5 board (1.0 x 0.75 x 0.062in) with copper mounting pad area of 2.9mm^2

OUTSTANDING SUPPORT AND SUPERIOR SERVICES

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

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd 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

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).

CONTACT US

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