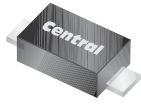


CMMR1U SERIES
SURFACE MOUNT
ULTRA FAST RECOVERY
SILICON RECTIFIER
1 AMP, 200 THRU 800 VOLTS



www.centrasemi.com



SOD-123F CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMMR1U Series are high quality 1.0 Amp Surface Mount Silicon Rectifiers, well constructed, highly reliable components designed for use in all types of commercial, industrial, entertainment, computer, and automotive applications. The SOD-123F case occupies 58% less board space than the SMA, with a 67% lower profile.

MARKING CODE: SEE MARKING CODE TABLE ON FOLLOWING PAGE

FEATURES:

- Flat lead design and clip assembly allow for a larger die size and improved thermal efficiency
- Superior lot to lot consistency
- Low cost
- High reliability

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

	SYMBOL	CMMR1U <u>-02</u>	CMMR1U <u>-04</u>	CMMR1U <u>-06</u>	CMMR1U <u>-08</u>	UNITS
Peak Repetitive Reverse Voltage	V_{RRM}	200	400	600	800	V
DC Blocking Voltage	V_R	200	400	600	800	V
RMS Reverse Voltage	$V_{R(RMS)}$	140	280	420	560	V
Average Forward Current ($T_L=90^\circ\text{C}$)	I_O			1.0		A
Peak Forward Surge Current (8.3ms)	I_{FSM}			30		A
Operating and Storage Junction Temperature	T_J, T_{stg}			-65 to +150		$^\circ\text{C}$
Thermal resistance (Note 1)	Θ_{JA}			180		$^\circ\text{C/W}$
Thermal resistance (Note 2)	Θ_{JA}			65		$^\circ\text{C/W}$

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

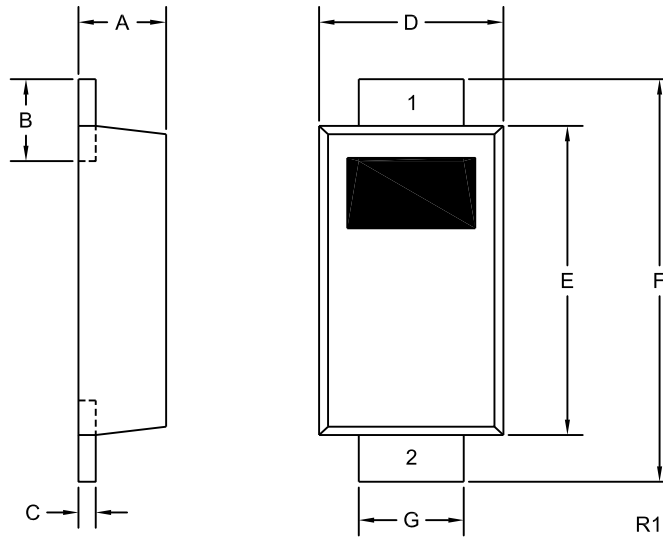
SYMBOL	TEST CONDITIONS	TYP	MAX	UNITS
I_R	$V_R=\text{Rated } V_{RRM}$		1.0	μA
I_R	$V_R=\text{Rated } V_{RRM}, T_A=125^\circ\text{C}$		50	μA
V_F	$I_F=1.0\text{A (CMMR1U-02)}$		1.0	V
V_F	$I_F=1.0\text{A (CMMR1U-04)}$		1.4	V
V_F	$I_F=1.0\text{A (CMMR1U-06, -08)}$		1.7	V
C_J	$V_R=4.0\text{V}, f=1.0\text{MHz}$	9.0		pF
t_{rr}	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A (CMMR1U-02, -04)}$		50	ns
t_{rr}	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A (CMMR1U-06, -08)}$		100	ns

Notes: (1) FR-4 Epoxy PCB with copper mounting pad area of 2.2mm^2
(2) FR-4 Epoxy PCB with copper mounting pad area of 36mm^2

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SOD-123F CASE - MECHANICAL OUTLINE



DEVICE	MARKING CODE
CMMR1U-02	CU02F
CMMR1U-04	CU04F
CMMR1U-06	CU06F
CMMR1U-08	CU08F

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)

LEAD CODE:
 1) Cathode
 2) Anode

R3 (20-December 2010)

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

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centalsemi.com

Worldwide Field Representatives:
www.centalsemi.com/wwreps

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