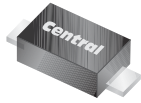


**CMMR1U SERIES**  
**SURFACE MOUNT**  
**ULTRA FAST RECOVERY**  
**SILICON RECTIFIER**  
**1 AMP, 200 THRU 800 VOLTS**



[www.centrasemi.com](http://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)	$\theta_{JA}$			180		$^\circ\text{C/W}$
Thermal resistance (Note 2)	$\theta_{JA}$			65		$^\circ\text{C/W}$

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

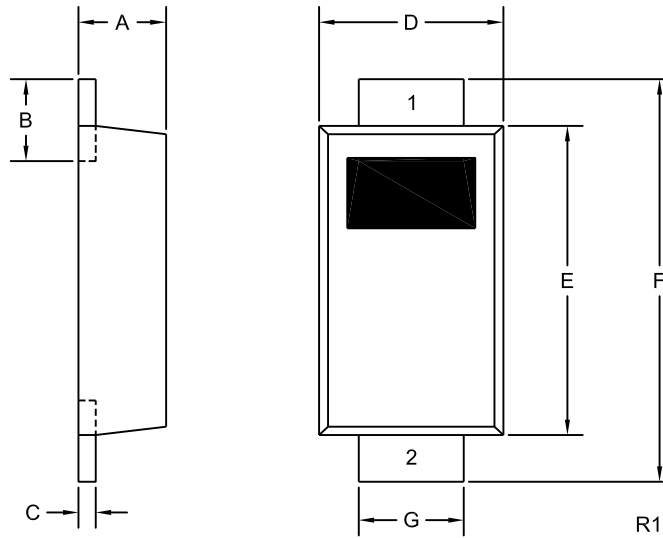
SYMBOL	TEST CONDITIONS	TYP	MAX	UNITS
$I_R$	$V_R=\text{Rated } V_{RRM}$		1.0	$\mu\text{A}$
$I_R$	$V_R=\text{Rated } V_{RRM}, T_A=125^\circ\text{C}$		50	$\mu\text{A}$
$V_F$	$I_F=1.0\text{A (CMMR1U-02)}$		1.0	V
$V_F$	$I_F=1.0\text{A (CMMR1U-04)}$		1.4	V
$V_F$	$I_F=1.0\text{A (CMMR1U-06, -08)}$		1.7	V
$C_J$	$V_R=4.0\text{V}, f=1.0\text{MHz}$	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  $2.2\text{mm}^2$   
(2) FR-4 Epoxy PCB with copper mounting pad area of  $36\text{mm}^2$

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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)