



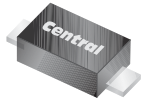
**THE DATASHEET OF  
CMMR1U-06 TR PBFREE**



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



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**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)

		<b>CMMR1U</b>	<b>CMMR1U</b>	<b>CMMR1U</b>	<b>CMMR1U</b>	
	<b>SYMBOL</b>	<b>-02</b>	<b>-04</b>	<b>-06</b>	<b>-08</b>	<b>UNITS</b>
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)

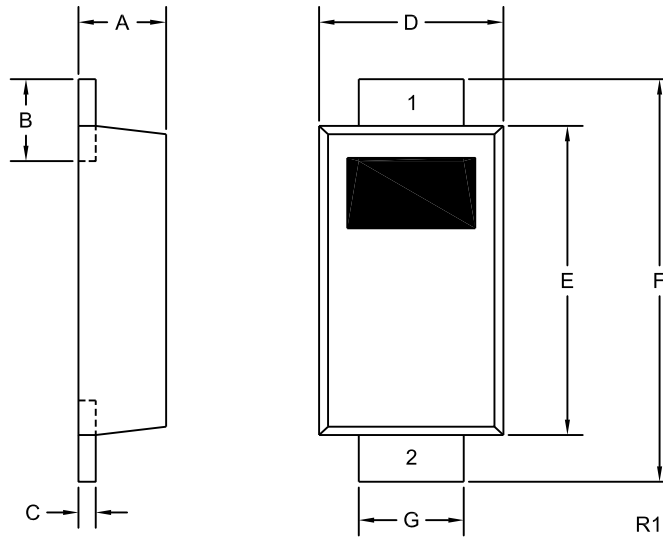
<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>TYP</b>	<b>MAX</b>	<b>UNITS</b>
$I_R$	$V_R=\text{Rated } V_{RRM}$		1.0	$\mu\text{A}$
$I_R$	$V_R=\text{Rated } V_{RRM}, T_A=125^\circ\text{C}$		50	$\mu\text{A}$
$V_F$	$I_F=1.0\text{A (CMMR1U-02)}$		1.0	V
$V_F$	$I_F=1.0\text{A (CMMR1U-04)}$		1.4	V
$V_F$	$I_F=1.0\text{A (CMMR1U-06, -08)}$		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)

## 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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