

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)

		CMMR1U	CMMR1U	CMMR1U	CMMR1U	
	SYMBOL	-02	-04	-06	-08	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

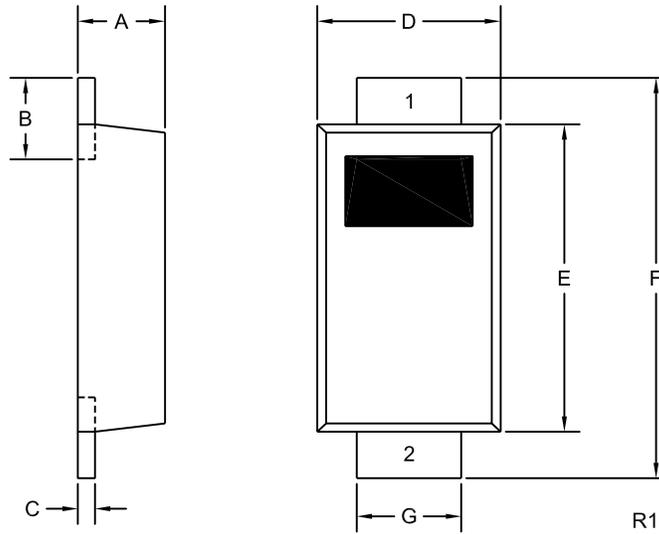
Notes: (1) FR-4 Epoxy PCB with copper mounting pad area of 2.2mm^2
(2) FR-4 Epoxy PCB with copper mounting pad area of 36mm^2

R3 (20-December 2010)

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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

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