

CMR1U-01M CMR1U-06M  
 CMR1U-02M CMR1U-10M  
 CMR1U-04M

**SURFACE MOUNT SILICON  
 ULTRA FAST RECOVERY RECTIFIERS  
 1.0 AMP, 100 THRU 1000 VOLT**



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMR1U-01M series 1.0 Amp surface mount Ultra Fast Recovery silicon rectifier is a highly reliable component designed for use in all types of commercial, industrial, entertainment, computer, and automotive applications where small size is required. The SMA case occupies 30% less board space than the SMB case.

**MARKING CODE: SEE MARKING CODE TABLE ON FOLLOWING PAGE**



**SMA CASE**

**FEATURES:**

- High reliability
- Glass passivated chip
- Special selections available

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

	SYMBOL	CMR1U-01M	CMR1U-02M	CMR1U-04M	CMR1U-06M	CMR1U-10M	UNITS
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	200	400	600	1000	V
DC Blocking Voltage	$V_R$	100	200	400	600	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	70	140	280	420	700	V
Average Forward Current ( $T_A=75^{\circ}\text{C}$ )	$I_O$			1.0			A
Peak Forward Surge Current, $t_p=8.3\text{ms}$	$I_{FSM}$			30			A
Operating and Storage Junction Temperature	$T_J, T_{stg}$			-65 to +175			$^{\circ}\text{C}$
Thermal Resistance	$\theta_{JL}$			30			$^{\circ}\text{C/W}$

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

SYMBOL	TEST CONDITIONS	TYP	MAX	UNITS
$I_R$	$V_R=\text{Rated } V_{RRM}$		5.0	$\mu\text{A}$
$V_F$	$I_F=1.0\text{A}$ , (CMR1U-01M, -02M)		1.00	V
$V_F$	$I_F=1.0\text{A}$ , (CMR1U-04M)		1.25	V
$V_F$	$I_F=1.0\text{A}$ , (CMR1U-06M)		1.40	V
$V_F$	$I_F=1.0\text{A}$ , (CMR1U-10M)		1.70	V
$t_{rr}$	$I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{rr}=0.25\text{A}$ (CMR1U-01M, -02M)		35	ns
$t_{rr}$	$I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{rr}=0.25\text{A}$ (CMR1U-04M)		50	ns
$t_{rr}$	$I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{rr}=0.25\text{A}$ (CMR1U-06M)		75	ns
$t_{rr}$	$I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_{rr}=0.25\text{A}$ (CMR1U-10M)		100	ns
$t_{fr}$	$I_F=1.0\text{A}$ , $V_{fr}=2.0\text{V}$	175	250	ns

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**SMA CASE - MECHANICAL OUTLINE**



DEVICE	MARKING CODE
CMR1U-01M	CU01M
CMR1U-02M	CU02M
CMR1U-04M	CU04M
CMR1U-06M	CU06M
CMR1U-10M	CU10M

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.030	0.060	0.76	1.52
B	0.004	0.008	0.10	0.20
C	0.006	0.012	0.15	0.30
D	0.078	0.103	1.98	2.62
E	0.188	0.220	4.78	5.59
F	0.090	0.115	2.29	2.92
G	0.050	0.070	1.27	1.78
H	0.157	0.181	3.99	4.60

SMA (REV: R2)

R6 (1-May 2015)

## 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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