

CMR1H-04MFL
SURFACE MOUNT SILICON
HYPERFAST
RECOVERY RECTIFIER
1.0 AMP, 400 VOLT



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMR1H-04MFL is a 1.0 Amp, HyperFast recovery rectifier constructed with a glass passivated die and packaged in the low profile and thermally efficient SMAFL case. The device is ideal for applications requiring extremely fast recovery times, low switching losses and high voltage capability. The SMAFL fits on existing industry standard SMA mounting pad layouts.

MARKING CODE: CSF04M

APPLICATIONS:

- Flyback diode
- Freewheeling diode
- DC-DC output rectification
- Voltage clamping

FEATURES:

- HyperFast recovery time (20ns TYP)
- Low switching losses
- Thermally efficient package
- Fits on standard SMA pad layouts

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

	SYMBOL		UNITS
Peak Repetitive Reverse Voltage	V_{RRM}	400	V
DC Blocking Voltage	V_R	400	V
RMS Reverse Voltage	$V_{R(RMS)}$	280	V
Average Forward Current ($T_L=120^\circ\text{C}$)	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 +150	$^\circ\text{C}$
Thermal Resistance	θ_{JL}	30	$^\circ\text{C/W}$

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

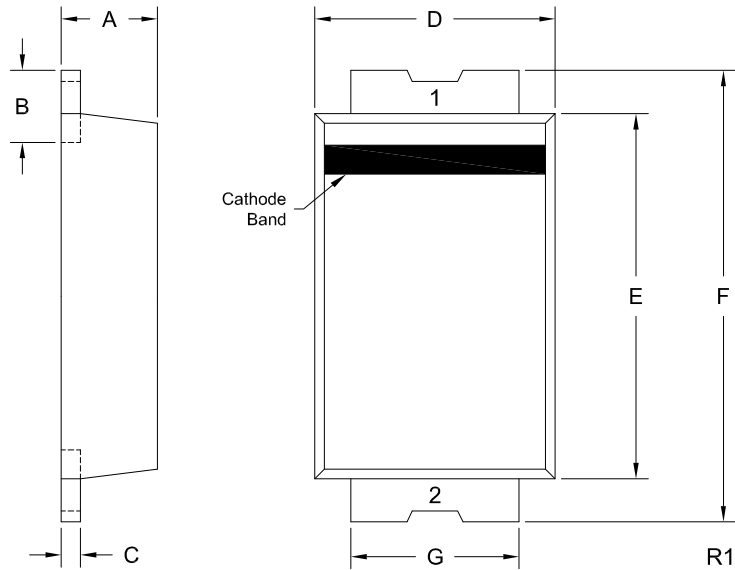
SYMBOL	TEST CONDITIONS	TYP	MAX	UNITS
I_R	$V_R=400\text{V}$	0.03	1.0	μA
I_R	$V_R=400\text{V}, T_A=100^\circ\text{C}$		150	μA
V_F	$I_F=1.0\text{A}$	1.1	1.25	V
C_J	$V_R=4.0\text{V}, f=1.0\text{MHz}$	13		pF
t_{rr}	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	20	25	ns

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SMAFL CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Cathode
- 2) Anode

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SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.035	0.044	0.90	1.10
B	0.021	0.038	0.55	0.95
C	0.006	0.010	0.15	0.25
D	0.094	0.103	2.40	2.60
E	0.145	0.154	3.70	3.90
F	0.177	0.193	4.50	4.90
G	0.065	0.073	1.65	1.85

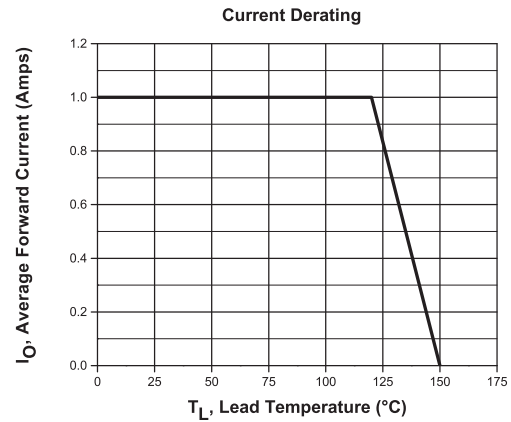
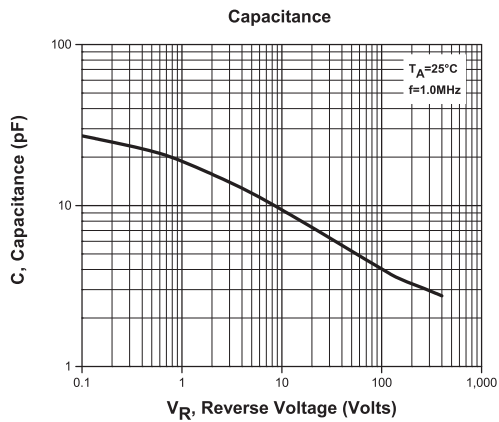
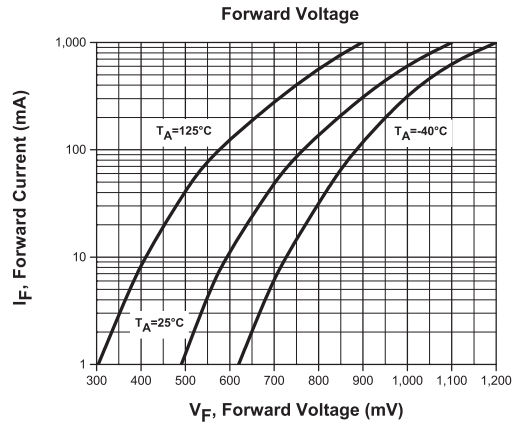
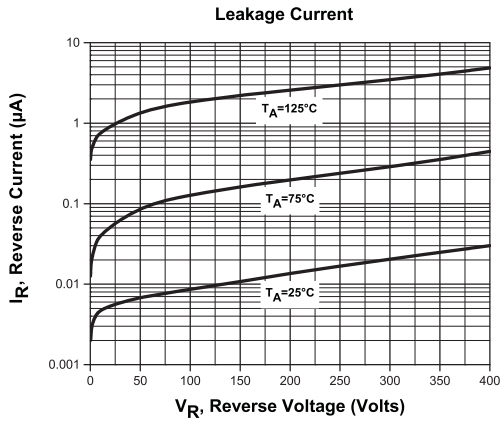
SMAFL (REV: R1)

R2 (28-June 2021)

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TYPICAL ELECTRICAL CHARACTERISTICS



R2 (28-June 2021)

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

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).

CONTACT US

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