

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	$^\circ\text{C/W}$

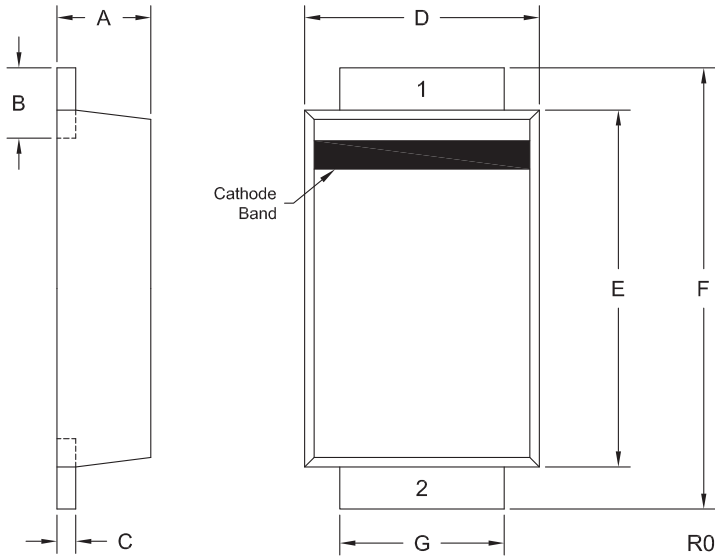
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

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

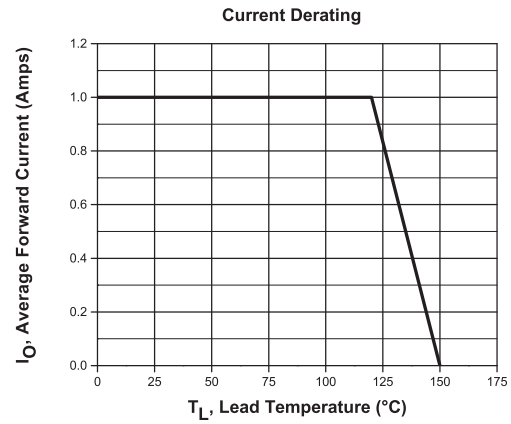
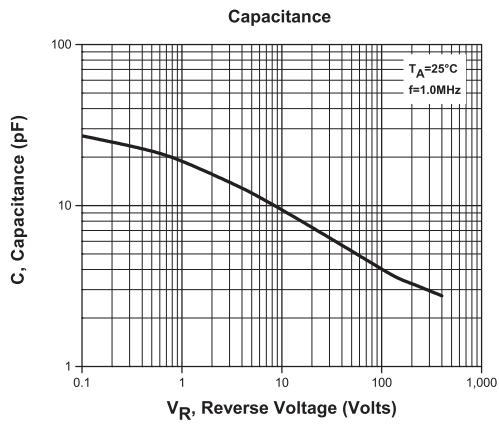
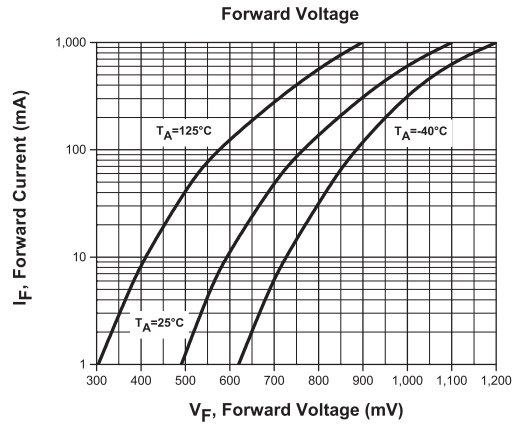
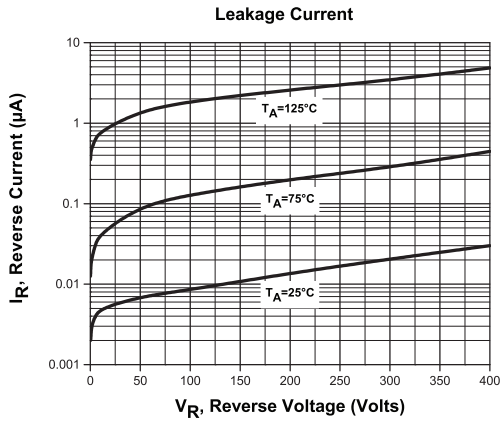
SMAFL (REV: R0)

R1 (19-August 2013)

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TYPICAL ELECTRICAL CHARACTERISTICS



R1 (19-August 2013)