

**CMAD4448****SURFACE MOUNT
SILICON ULTRA HIGH SPEED
SWITCHING DIODE****FEMTOmini™****SOD-923 CASE****Central™**
Semiconductor Corp.**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMAD4448 is an ultra high speed switching diode ideal for applications where very small size and operational efficiency are prime requirements.

MARKING CODE: M**APPLICATIONS:**

- DC / DC Converters
- Voltage Clamping
- Protection Circuits
- Battery powered applications including Cell Phones, Digital Cameras, Pagers, PDAs, Laptop Computers, etc.

FEATURES:

- Current ($I_O=250\text{mA}$)
- Forward Voltage Drop ($V_F=0.91\text{V TYP @ } 100\text{mA}$)
- Extremely Fast Switching Speed (4ns Max)
- Miniture, 0.8 x 0.6 x 0.4mm, ultra low height profile **FEMTOmini™** Surface Mount Package.

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

Peak Repetitive Reverse Voltage
Continuous Forward Current
Peak Repetitive Forward Current
Forward Surge Current, $t_p=1\text{ ms}$
Forward Surge Current, $t_p=1\text{ s}$
Power Dissipation
Operating and Storage
Junction Temperature
Thermal Resistance

SYMBOL V_{RRM}

120

UNITS

V

 I_F

250

mA

 I_{FRM}

500

mA

 I_{FSM}

4.0

A

 I_{FSM}

1.0

A

 P_D

100

mW

 T_J, T_{stg}

-65 to +150

 $^\circ\text{C}$ Θ_{JA}

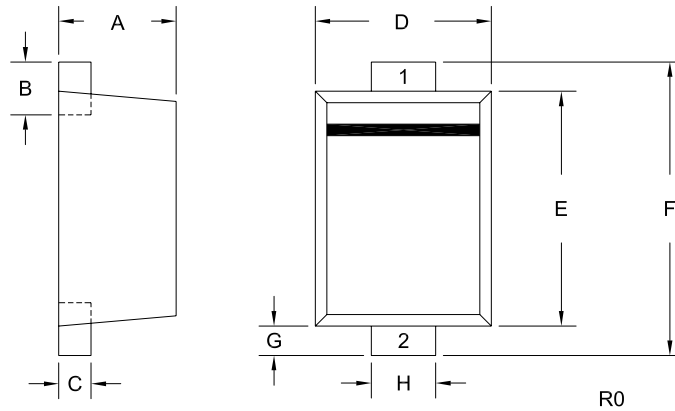
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 $^\circ\text{C/W}$ **ELECTRICAL CHARACTERISTICS:** ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
BV_R	$I_R=100\mu\text{A}$	120	150		V
I_R	$V_R=50\text{V}$			300	nA
I_R	$V_R=50\text{V}, T_A=125^\circ\text{C}$			100	μA
I_R	$V_R=100\text{V}$			500	nA
V_F	$I_F=1.0\text{mA}$	0.55	0.59	0.65	V
V_F	$I_F=10\text{mA}$	0.67	0.72	0.77	V
V_F	$I_F=100\text{mA}$	0.85	0.91	1.0	V
C_T	$V_R=0, f=1\text{ MHz}$			2.0	pF
t_{rr}	$I_R=I_F=10\text{mA}, R_L=100\Omega, \text{Rec. to } 1.0\text{mA}$		2.0	4.0	ns

R0 (20-April 2007)

SOD-923 CASE - MECHANICAL OUTLINE



DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.015	0.016	0.39	0.41
B	0.004	0.010	0.10	0.26
C	0.003	0.006	0.08	0.14
D	0.022	0.026	0.55	0.65
E	0.030	0.033	0.75	0.85
F	0.035	0.043	0.90	1.10
G	0.002	0.006	0.05	0.15
H	0.007	0.011	0.17	0.27

SOD-923 (REV: R0)

Lead Code:
1) Cathode
2) Anode

R0 (20-April 2007)