



**CMAD6001**

**SURFACE MOUNT  
SILICON ULTRA LOW LEAKAGE  
SWITCHING DIODE**

**FEMTOmini™**



**SOD-923 CASE**

**Central™**  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMAD6001 is an ultra low leakage switching diode ideal for applications where very small size and operational efficiency are prime requirements.

**MARKING CODE: Q**

**FEATURES:**

- Current ( $I_F=250\text{mA}$ )
- Forward Voltage Drop ( $V_F=1.1\text{V MAX @ }100\text{mA}$ )
- Low Reverse Current ( $500\text{pA MAX @ }75\text{V}$ )
- Miniature,  $0.8 \times 0.6 \times 0.4\text{mm}$ , ultra low height profile **FEMTOmini™** Surface Mount Package.

**APPLICATIONS:**

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

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

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

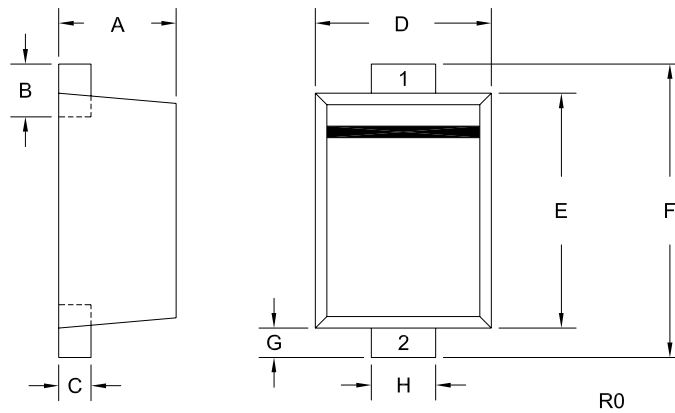
SYMBOL		UNITS
$V_R$	75	V
$V_{RRM}$	100	V
$I_F$	250	mA
$I_{FSM}$	4000	mA
$I_{FSM}$	1000	mA
$P_D$	100	mW
$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
$\Theta_{JA}$	1250	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_R$	$V_R=75\text{V}$		500	pA
$BV_R$	$I_R=100\mu\text{A}$	100		V
$V_F$	$I_F=1.0\text{mA}$		0.85	V
$V_F$	$I_F=10\text{mA}$		0.95	V
$V_F$	$I_F=100\text{mA}$		1.1	V
$C_T$	$V_R=0, f=1 \text{MHz}$		2.0	pF
$t_{rr}$	$I_R=I_F=10\text{mA}, R_L=100\Omega \text{ Rec. to } 1.0\text{mA}$		3.0	$\mu\text{s}$

R0 (23-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 (23-April 2007)