



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 x 0.6 x 0.4mm, 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: ( $T_A=25^\circ\text{C}$ )

	SYMBOL		UNITS
Continuous Reverse Voltage	$V_R$	75	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	V
Continuous Forward Current	$I_F$	250	mA
Forward Surge Current, $t_p=1 \mu\text{sec.}$	$I_{FSM}$	4000	mA
Forward Surge Current, $t_p=1 \text{sec.}$	$I_{FSM}$	1000	mA
Power Dissipation	$P_D$	100	mW
Operating and Storage			
Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\Theta_{JA}$	1250	$^\circ\text{C/W}$

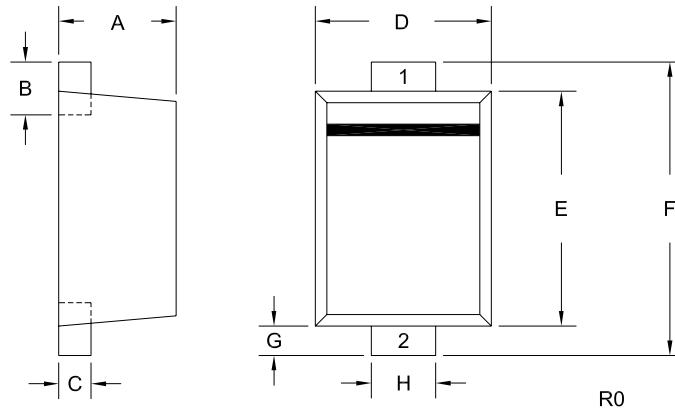
### ELECTRICAL CHARACTERISTICS: ( $T_A=25^\circ\text{C}$ unless otherwise noted)

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)

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**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

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