

CMAD6001

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

**FEMTOmini™**



**SOD-923 CASE**



[www.centrasemi.com](http://www.centrasemi.com)

**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**

**APPLICATIONS:**

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

**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.

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

Continuous Reverse Voltage  
Peak Repetitive Reverse Voltage  
Continuous Forward Current  
Peak Forward Surge Current,  $t_p=1.0\mu\text{s}$   
Peak Forward Surge Current,  $t_p=1.0\text{s}$   
Power Dissipation  
Operating and Storage Junction Temperature  
Thermal Resistance

**SYMBOL**

$V_R$	75
$V_{RRM}$	100
$I_F$	250
$I_{FSM}$	4.0
$I_{FSM}$	1.0
$P_D$	100
$T_J, T_{stg}$	-65 to +150
$\Theta_{JA}$	1250

**UNITS**

V  
V  
mA  
A  
A  
mW  
 $^\circ\text{C}$   
 $^\circ\text{C/W}$

**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
$C_T$	$V_R=0, f=1.0\text{MHz}$		2.0	pF
$t_{rr}$	$I_R=I_F=10\text{mA}, R_L=100\Omega$ Rec. to $1.0\text{mA}$		3.0	$\mu\text{s}$

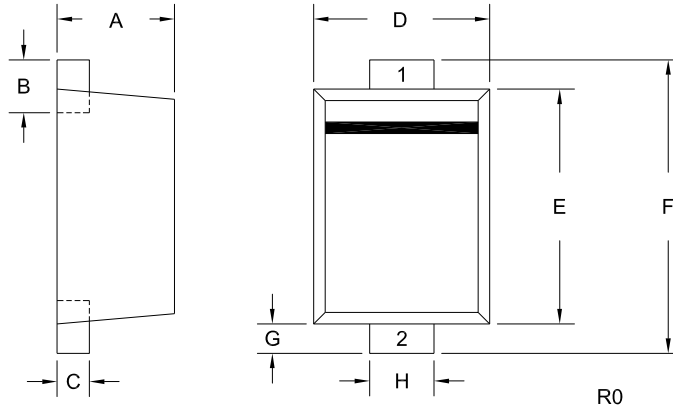
R1 (8-January 2010)

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**SOD-923 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**  
1) CATHODE  
2) ANODE

**MARKING CODE: Q**

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)

R1 (8-January 2010)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

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